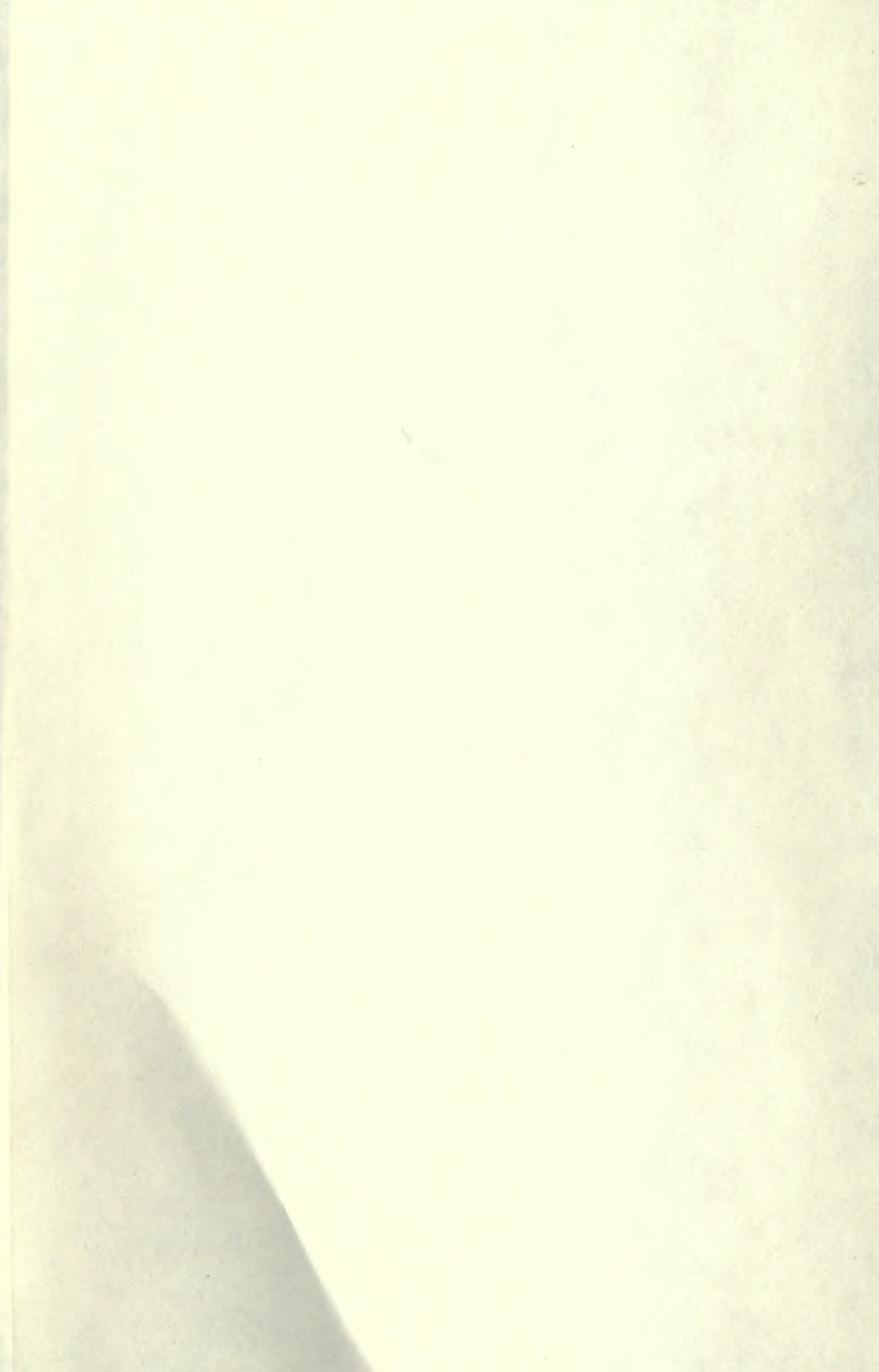




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QUEEN ELIZABETH,
THE FOUNDER OF OUR COLONIAL EMPIRE.

OB. 1603.

FROM THE ORIGINAL OF ZUCCHERO, IN THE COLLECTION OF
THE MOST NOBLE THE MARQUIS OF SALISBURY

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By Special Authority

Dedicated to Her Most

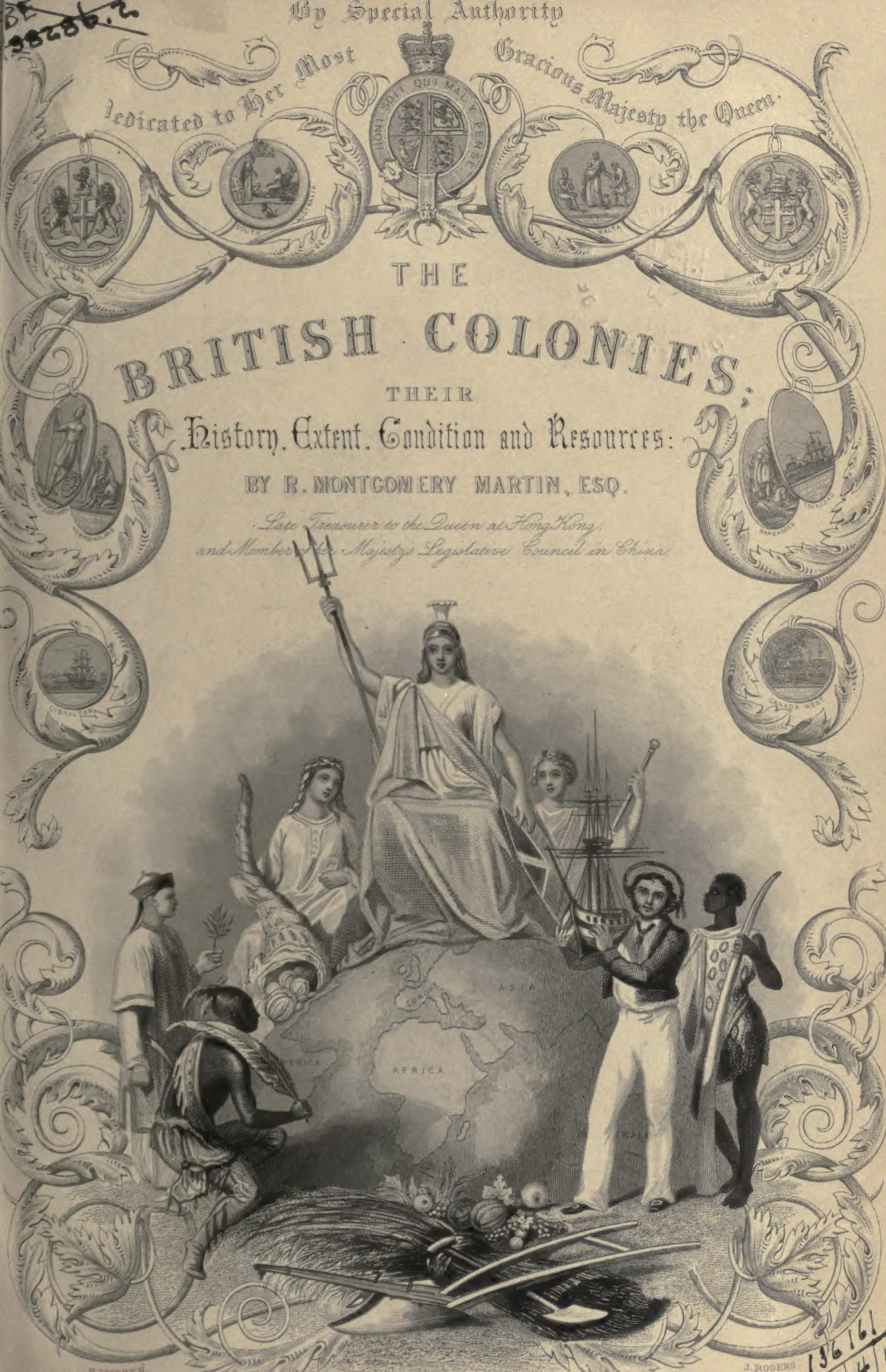
Gracious Majesty the Queen.



THE
BRITISH COLONIES;
THEIR
History, Extent, Condition and Resources:

BY R. MONTGOMERY MARTIN, ESQ.

*Late Treasurer to the Queen at Hong Kong,
and Member of Her Majesty's Legislative Council in China.*



TO THE
QUEEN'S MOST EXCELLENT MAJESTY.

MADAM,

IN soliciting authority to lay this Work before your Majesty, I was actuated not merely by the desire common to every faithful subject of testifying, however humbly, a sense of dutiful affection to my Sovereign, but yet more from a conviction that a History of the Colonies, their Extent, Condition, and Resources, could with propriety be dedicated only to a Monarch most deeply interested in their welfare, and fully impressed with the value of these integral parts of the British Empire.

I have briefly traced the origin and progress of your Majesty's Colonial Dominion, the foundations of which were laid by the provident policy of your regal ancestors, Queen Elizabeth and King James the First, aided by the sagacious counsels of the great Lord Bacon; the wondrous structure has been reared with persevering energy by the wisdom of such statesmen as Clarendon, Halifax, Chatham, Burke, Pitt, Peel, and Russell; it has been enlarged and adorned by the genius of such patriots as Raleigh, Baltimore, Penn, Cook, Clive, Hastings, Cornwallis, and Wellesley; defended by the valour of such warriors as Wolfe, Elliott (Heathfield), Brock, Lake, Sale—Wellington, Hardinge, Gough, and Napier; and by the naval skill of Drake, Hawkins, Frobisher, Blake, Anson, Rodney, Duncan, Howe, Jervis, Collingwood, and Nelson.

The acquisition and improvement of Colonies has indeed been deemed so essential an element of national power and prosperity, that the best blood, the wealth, the talent of England have been unsparingly devoted to this great end; which, though at a costly sacrifice, has been attained; and in every quarter of the globe the Transmarine Territories of the Crown exhibit monuments of British heroism, proofs of patriotic deeds, and permanent illustrations of administrative ability.

The rule of your Majesty now controls an Empire so vast in its extent, that the influence of England is exercised in the remotest parts of the globe; the Sceptre of Your Power protects (beyond the limits of the United Kingdom) more than one hundred million FREEMEN—civil and religious liberty being the birthright of every Citizen of a State, whose first principles of government will

not allow her to tolerate slavery in any form, or persecution under any pretence—whether affecting her own children, or the stranger who comes within her gates.

Blessings such as these render the sway of your Majesty a substantial benefit to every denizen of this mighty Empire;—all share in its glory and prosperity, and have a common interest in the progress and proceedings of their fellow-subjects. The social and domestic habits, manners, and customs of the Parent State are preserved and adopted in the Colonies; the numerous temples of worship, schools, and hospitals, which distinguish England from every other nation on the face of the earth, and are the best evidence of her Christian character; the general principles of obedience to the laws, respect for authority, and love of order—are equally manifest in our most distant settlements as in any county of the United Kingdom.

To another striking point of resemblance I am enabled to bear my humble testimony; in the course of a personal examination of the greater part of your Majesty's Transmarine Dominions, I have had many opportunities of witnessing the loyalty of the Colonists;—they love “the island home,” that is to them the nucleus of their national feelings—cherish a strong attachment to their Sovereign and to Her Illustrious Consort—and earnestly desire to participate in the honours and distinctions which, emanating directly from the Throne, cause its dignity to be appreciated, even in the remotest portions of the Realm.

Two members of the Royal Family have visited the Colonies: his late Majesty King William the Fourth, who ever evinced an earnest solicitude for their welfare—and your Majesty's Royal Father, whose memory is still venerated in British America; for there, as in England, his just and generous mind—his catholic and philanthropic spirit—found its purest delight in promoting the welfare of his fellow-subjects, and in mitigating human suffering.

I acknowledge with deep respect the gracious indulgence of your Majesty in authorizing a Dedication of my endeavours to make the condition and worth of the Colonies more generally known and more fully appreciated—and I sincerely hope that the intrinsic importance of the subject may not be undervalued through my inadequate efforts for its development.

I have the Honour to be,

MADAM,

Your Majesty's dutiful Subject,

R. M. MARTIN.

INTRODUCTION.

SECTION I.

COLONIZATION OF ANCIENT AND MODERN NATIONS.

COLONIZATION,* that is the occupation and tillage of waste lands, is in accordance with the primary decree of Heaven, that man should be "fruitful and multiply, and replenish the earth, and subdue it." The earliest records of mankind consist chiefly of the history of migrations from one part of the globe to another, as population increased, or civilization created new wants.

This great principle, like the other primary laws of the creation, is universal in its operation, and extends throughout the animal and vegetable world; what man does from reason, the brutes do from instinct: gregarious animals separate into herds, and disperse themselves over a country as pasture diminishes; trees and roots send winged seeds or offshoots to a considerable distance to perpetuate their stock, or in search of nourishment; fish migrate from sea to sea; and insects traverse diverse regions according to their respective exigencies.

But the natural desire for abundant sustenance which impels the migration of animals, is counteracted in man by a strong attachment to his birth-place—by love of kindred, and by those social ties which bind together human societies. And it is wisely ordained that it should be so: man would never have advanced beyond the nomadic or wandering state, but for those local associations which attach him to his native land, and give an indescribable charm to the river, the mountain, or the glen, where the days of childhood have been spent, and where the emotions connected with his first ideas have been enjoyed.

Many urgent reasons, however, arise to counteract the force of local attachments. The duty of providing for offspring—a desire for adventure—the love of fame or conquest—a difference in religious or political opinions—a thirst for information,—each and all tend to disseminate mankind over regions which, from their position, climate, soil, or other advantages, present the best prospects of gratifying their desires.

We see these motives operating in successive ages; we trace them in the lives of Shem, Ham, and Japhet; of Abraham, Isaac, and Jacob; and when individuality is merged

* *Colonus*, in the Roman acceptance of the word, originally signified as much land as one person could cultivate—"Quantum Colonius unus erat poterat;" from *Colonus* was derived *Colonia*, signifying a body of husbandmen sent out from the parent stock to cultivate other lands, and by a metonymy the place to be cultivated received the same appellation as the inhabitants who were to cultivate it,—*Colonia*:—hence the word Colony, which is used in the present work to designate *all* the maritime possessions and dependencies under the dominion of the British crown, not represented in the Parliament of the United Kingdom.

in national history, we mark them influencing the destinies of Egypt, Greece, Carthage, and Rome; and, in a later age, those of Spain, Portugal, Holland, France, and England.

Egypt appears to have been colonized by a race who, after the dispersion of mankind on the plains of Shinar, B.C. 2287, travelled westward, and spread themselves over Upper Egypt, founded Thebes, occupied the fertile banks of the Nile, and established Phœnician settlements, which, for a time, included almost the whole of the South coast of the Mediterranean, from Egypt to Gibraltar.

In the year 1556, B.C., Cecrops, at the head of a band of colonists, migrated from Egypt into Attica, and became the first king of Athens; in 1546, B.C., Scamander from Crete, founded Troy; in 1493, B.C., Cadmus introduced into Greece the Phœnician letters, formed the Greek alphabet, and founded Thebes. The expedition of the Argonauts was undertaken B.C. 1263, with the intention of opening the commerce of the Euxine Sea, and of establishing Colonies in the adjacent country of Colchis.

As the kingdoms or republics of Greece advanced in art, science, and literature, internal commotions arose. Food was with difficulty obtained for a superabundant and increasing population, consisting chiefly of slaves, and expeditions were fitted out by vanquished or disappointed politicians, or by adventurers desirous of fame, or prompted by a spirit of commercial enterprise, for the formation of colonies in the maritime ports of Asia Minor, in the Ægean and Ionian Seas, and in Italy. B.C. 1243, the Arcadians were conducted by Evander into Italy; B.C. 1124, the migration of the Æolian Colonists took place; B.C. 1044, the Ionian Colonies were formed by Greeks; B.C. 732, Syracuse was built by Corinthian Colonists; B.C. 713, Gela in Sicily was founded; B.C. 707, Tarentum was built by the Parthenians when expelled from Sparta; B.C. 703, Corecya was founded by the Corinthians; B.C. 665, the Messenians, on their expulsion from the Peloponessus, passed into Italy; B.C. 658, Byzantium was built by a colony of Argives; B.C. 539, the Phocæans settled in Gaul, and built Marseilles; B.C. 469, the Tuscans formed a colony at Capua; B.C. 444, the Athenians sent a colonizing expedition to Thurium in Italy, and among the adventurers were Herodotus, Thucydides, and Lysias; B.C. 304, Seleucus founded Antioch, Edessa, Laodicea, &c. The Colonies of the Dorians were chiefly established in Italy and in Sicily, then inhabited by barbarous tribes; those of the Ionians and Æolians in Asia Minor and the islands of the Ægean Sea.

The Greek term for Colonies was *αποικια*—a “separation of dwelling”—a “departure from or going out of a house;” and the word well expresses the character of the Greek Colonies, which were often formed by a large number of individuals emigrating in organized communities from their native country, whose Government ceased to possess any authority over them; but with which, in many instances, they remained feudally united; aiding the parent state in time of war with money, ships, and warriors, or furnishing mercenary troops, as the Greeks (themselves originally Egyptian Colonists) had done to Alexandria. The Greek Colonies frequently asserted their independence by refusing assistance to the mother country, unless their own terms were conceded; thus the Sicilians denied the admission of an Athenian army into their territory to rest, when proceeding on an expedition; and Syracuse refused to co-operate with the Lacedæmonians during the Punic war, until Gelon, their chief magistrate, was allowed to command the united forces. In some cases the colonists severed themselves entirely from their native

land, and sought the protection of another government; thus Corcyra and Potidæ, colonies of Corinth, united themselves to Athens.

In the present day such settlements would not come under the denomination of Colonies; they were virtually independent states, maintaining an alliance with governments able to afford them protection, but they added neither power nor wealth to the states from which they sprung, or with which they were connected.

The Colonies of Carthage were formed on a different principle from those of Greece; they were regarded chiefly as a means of commercial advantage, and maintained as strict monopolies for the benefit of the parent state. Carthage, the most celebrated of the Phœnician Colonies, was established by settlers from Tyre. The city of Carthage was built B.C. 878, and destroyed by the Romans B.C. 146.

Throughout the greater part of the intervening period of 732 years, Carthage was engaged in extending her dominion beyond the limited spot on the African coast where the city was first established. Three hundred African cities owned her sway, which extended for 2000 miles along the sea coast, from the Syrtis Major to the "Pillars of Hercules." Sardinia, formerly belonging to Etruria, was one of her earliest colonies, and the agricultural resources and mineral wealth of the island rendered it a very valuable possession. Malta, Majorca, and Minorca, previously under the rule of Tyre, yielded to the supremacy of Carthage. Along the coasts of Spain, on the shores of Great Britain and Ireland, as far, if not farther south along the coast of Africa than Senegal and the Gambia, Carthage acquired settlements, or extended her commerce. The sole occupation of Sicily was long contested with the Greeks; its entire possession would most probably have delayed, if not averted, the ultimate effects of the Punic wars; but in the first of these wars Sicily and Sardinia were lost to Carthage. Deprived of those possessions, and consequently of the commerce and maritime position which they secured, the ruin of the Carthaginian power was rapid, and its conquerors became in their turn a great Colonizing nation.

The Romans, soon after the foundation of the Imperial City, planted settlements in its neighbourhood, which served as outworks for defence, and for the supply of the necessaries and luxuries of life. During the second Punic war, sixty such colonies were established. After the destruction of the Carthaginian power, the spirit of conquest and the urgent necessity of providing for large numbers of disbanded and often mutinous soldiery, whose only means of subsistence lay in the tillage of the earth; the agrarian laws by which the senate was obliged to provide all its citizens with land, the augmentation of slaves, and the abundance of money, for which a profitable investment was found almost exclusively in the cultivation of the soil, all led to a rapid extension of the Roman Colonies.

The lands of conquered countries were considered the property of the state, and they were parcelled out among the public officers of the government, apportioned to the citizens for whom land could not be provided at home, and distributed among the soldiery. Military establishments were formed in the most fertile or the most secure places, where the wealth of the colony could be obtained, and its possession secured against any rising of the native inhabitants. Colonies such as these extended over Gaul, Germany, Spain, and England, and throughout various parts of Asia and Africa. It is difficult to estimate the area occupied by these colonies. From the foundation of the city to the death

of Augustus, 164 colonies were established in Italy, and 199 in the provinces. Crete became a Roman colony B.C. 66. Cæsar formed plans (B.C. 45) for rebuilding Carthage and Corinth. London was built by the Romans A.D. 50. Agricola reduced South Britain to a Roman Province, A.D. 82. Augustus planted twenty-eight colonies in Italy; fifty-seven were established in Africa, exclusive of Egypt; twenty-five in Spain; four in Dacia, and five in Britain. It was estimated in the reign of Claudius, that Rome and its colonies contained 126,000,000 people.

The colonies furnished employment for the more adventurous of the Roman citizens, and yielded large returns for invested capital. Seneca (who at his death had money to the value of £600,000 sterling due to him from colonists in Britain) assigns the following reasons for the formation of colonies, which are equally applicable in the present day :—

“Nec omnibus eadem causa relinquendi quærendique patriam fuit. Alios excidia urbium suarum, hostilibus armis elapsos, in aliena, spoliatis suis, expulserunt: Alios domestica seditio submovit: Alios nimia superfluentia populi, frequentia, ad exonerandas vires, emisit: Alios pestilentia, aut frequens terrarum hiatus, aut aliqua intoleranda infelicitas soli eiecerunt: Quosdam fertilis oræ, et in rarijus laudatæ, fama corripit: Alios alia causa excivit domibus suis.”—(*Consol. ad Helviam*, c. 6.)

The colonists sent out by the senate were either Roman or Latin citizens.

The *Coloniæ Romanæ* enjoyed only to a limited extent the *Jus Romanum*; they were not permitted to exercise the right of suffrage, and magisterial dignities, military command, &c., were denied them; they were permitted solely the *Jus Quiritum*, namely, personal liberty, honours of gentility, dignity of family, &c.; and they were compelled to furnish such contributions as the senate and emperors chose to demand.

The *Coloniæ Latine* possessed rights and privileges of their own; were empowered to a certain extent to form their own laws; and whoever became an edile, or prætor, in a Latin town, enjoyed, by right of office, the rank of a Roman citizen. These Latin colonies also rendered tribute to the parent state. Their rights were styled *Jus Latii*, and it was not until after the Servile War that the privileges of Roman citizens were granted by the *lex Julia* to all the Latin Colonists.

There were other colonies whose privileges were comprised in the *Jus Italicum*; they were free from the taxes paid by the *Coloniæ Latine et Romanæ*; of this class were the Colonies of Tyre, Heliopolis, Palmyra, &c. Most of the colonies furnished their quota of troops for the Roman legions; the natives of each colony were drafted into regiments serving in distant settlements.

Political selfishness and inordinate ambition were the predominative motives of Rome, both in the formation and in the government of her colonies; which, as they grew powerful, threw off the yoke of their military tyrants. After 400 years' occupation of England, excepting in the roads made for the more complete subjugation of the islanders, we find few traces of the boasted Roman civilization, and no permanent benefit from their rule. Fifty years after the conquest of Asia, 150,000 Roman citizens were massacred by order of Mithridates; there was no binding link to connect distant parts of the empire; no community of language or of interests, and centuries of conquest and despotism, slavery and crime terminated, happily for mankind, in the complete overthrow of the “Mistress of the World.”

Proceeding chronologically (passing over the incursions and migrations of the

Northmen, Normans, or Danes, in the ninth and tenth centuries), the next Colonizing Power is the Republic of Venice, which was founded on the lagunes of the Adriatic, A.D. 737, by colonists from the Romana-Italian province of Venetia. The colonies of Venice extended along the coast of Dalmatia, to the Ionian islands, the Morea, the Greek Archipelago, Candia, &c. They were designed chiefly with a view to the extension of commerce; but Corfu and other settlements in the Ionian Islands evince to this day the power, opulence, and deep-laid policy of the Venetians. Genoa, on the acquisition of colonies in the Levant, along the coast of Provence, and in the Crimea, rivalled Venice; but both states fell into decay through the loss of their foreign possessions. The discovery of the new continent of America, (A.D. 1492) and of a passage by the Cape of Good Hope to India, opened to Spain and Portugal the means of acquiring colonial dominion, and gave a new direction to the commerce of the eastern and western hemisphere.

Heretofore all European, Asiatic, and African trade had been carried on by land, or by frail barks skirting the coast-line, or passing from island to island by circuitous and expensive routes. But the introduction of the mariner's compass into Europe from Asia (A.D. 1229) made the trackless ocean the high road of daring navigators, and brought the distant parts of the earth into comparatively close communication. From this era may be dated the commencement of a new and important epoch in the history of maritime commerce and of modern colonization. The nautical skill and daring of Prince Henry of Portugal, in the beginning of the fifteenth century, were rewarded by the discovery of Madeira and of Western Africa; the politic and thrifty Henry the Seventh of England gave employment to navigators in the hope of adding to his wealth and extending his dominions; but to the noble-minded Isabella of Spain, and the profound speculations, courage, and perseverance of Columbus, Europe is indebted for the discovery of a "new world" on the 11th of October, 1492. Between the years 1508 and 1510 Spain formed colonies in Cuba, Porto Rico, and Jamaica. In 1519 Cortez landed at Vera Cruz, and in 1521, with a few adventurers, conquered Mexico. Peru, Chili, and Quito were added to the crown of Spain between 1529 and 1535 by Pizarro and his generals. In 1532 Terra Firma was occupied: in 1536 New Grenada was subjected, and Manilla in 1564. The narrow-minded policy of Spain prohibited one colony trading with another, the colonial commerce was restricted to certain ports in the mother country, and for a long period Seville was the only port in Spain with which the colonies were allowed to hold intercourse. The object of the Spaniards in the acquisition of these colonies was neither that of the Egyptians, Grecians, Carthaginians, or Romans. Gold was the prevailing motive; the desire for immediate wealth over-ruled every consideration of humanity, of justice, or of sound policy; the natives were worked to death in the mines, shot like wild beasts, if they offered the slightest resistance to their merciless oppressors, or hunted with blood-hounds if they attempted to escape from the demons in human form who wantonly sported with their sufferings. Language would fail to convey an adequate idea of the atrocities perpetrated by the Spanish colonizers on the Indians, whose rapid extermination led to the introduction of negro slaves from Africa. Spain, for a time, derived great wealth, and obtained much power by means of her colonies; but no lasting benefit could arise from such ill-gotten riches and dominion. Spain lost in succession all her vast possessions in the

Floridas, Mexico, California, Darien, Terra Firma, Buenos Ayres, Paraguay, Chili, and Peru. She was entirely driven from every continental territory; Cuba, Porto Rico, Manilla, Teneriffe, &c., now alone remain; and notwithstanding her internal wealth, fine climate, and advantageous position on the peninsula of Europe, Spain, with her thirteen million inhabitants, is now the most sunken, degraded, and powerless nation of the western world.

Portugal competed for colonial territory with Spain, and by a papal decree the new countries in the eastern and western hemispheres were divided between the rival states, without reference to any other European nation. Madeira was discovered A.D. 1419; Cape Bojador, in Africa, 1439; Cape de Verd, 1446; the Azores, 1448; Cape de Verd Islands and Sierra Leone, in 1449. In 1484 the Congo was visited and the Cape of Good Hope discovered. In 1498 Vasco de Gama, after doubling the Cape, landed in Calicut, on the shores of Hindoostan, and subsequently the Portuguese built forts and formed colonies at Mozambique, Sofala, Melinda, and other places on the eastern coast of Africa; at Ormus and at Muscat, in the Persian Gulf; at Goa, Diu, and Damaun, on the western or Malabar shores of the peninsula of India; Negapatam, and Meliapoor, on the Coromandel coast; at Malacca, and on the coast of China. In 1500 Brazil was discovered, in 1511 the Spice Islands were colonized, and about 1520 Ceylon was occupied by the Portuguese.

Although the hope of obtaining gold did, to a certain extent, encourage the progress of Portuguese discovery and colonization, the predominating motives were a love of adventure, a hope of attaining fame, or of acquiring honours from a patriotic sovereign; and, in a great degree, a religious spirit, verging on fanaticism, prompted many to seek, by converting the heathen, to extend the faith of the Cross. With the chivalry and enthusiasm of the Portuguese character in the sixteenth century was united nautical skill and commercial enterprise, of which latter the Spaniards were exceedingly jealous, and on the union of Portugal with Spain, the colonies of the former were quite neglected in favour of the latter. As Portugal lost her foreign possessions she sank in the European scale, and her colonies are now reduced to a few wretched forts in Africa: the small town of Macao in China, the island of Timor in the Eastern Archipelago, Goa (once a place of great splendour in India, now deserted, and in ruins), Madeira, the Cape Verd Islands, and some smaller places. As in other instances, the loss of her colonies has been followed by a change of the national spirit into apathy, indolence, and degradation.

A power that had reclaimed its territory from the ravages of the ocean, competed with Spain and Portugal for colonial dominion. The Dutch, while yet struggling for independence, were employed as the carriers to Lisbon from the colonies of Portugal, and thus became acquainted with the value of colonial trade. In 1584, Philip II. of Spain prohibited the intercourse of the Dutch with Lisbon; these orders being evaded were revived with greater strictness in 1594, and a number of Dutch vessels seized in Lisbon harbour were destroyed. The Dutch, being deprived of the carrying trade, were compelled to seek colonies for themselves; to which they were stimulated by the writings of John de Witt, who urged that colonies offered a field for exertion to men of abilities—were a good substitute for hospitals and charitable foundations—and were advantageous for men who had been unfortunate in trade. An association was soon formed to trade to "remote

parts." The first expedition sailed for India, 20th March, 1602. Batavia, in the island of Java, was colonized in 1618; a trade with Japan opened in 1611; a West India Company established in 1621; settlements were formed and conquests made in Brazil from 1630 to 1640; Ceylon captured from the Portuguese in 1640; St. Eustatia, Curaçoa, Saba, and St. Martin in the West Indies, colonized from 1632 to 1649; Surinam, Essequibo, Berbice, and Paramaribo acquired in 1670. Dutch settlements were formed in Asia, also at the Cape of Good Hope, and several parts of the African coasts; at New York, and other places on the continent of North America; and Holland soon rose superior to her former masters in maritime power, commercial opulence, and political consideration; but at the commencement of the present century, when Holland lost Ceylon, the Cape of Good Hope, Demerara, Java, &c., she sunk into comparative insignificance, from which she was only rescued by England's restoring Java, and other possessions in the rich Eastern Archipelago, by which the Dutch are now mainly enabled to maintain their position among European nations.

France was not an idle spectator of the contests for oceanic supremacy, which the possession of colonies conferred. Francis the First, with the ardour of an enterprising mind, encouraged maritime discovery. In 1552 Gaspard de Coligny, who had early embraced the reformed faith, was appointed admiral of France; and with the hope of rivalling every other nation in Europe, he projected a grand scheme of colonization, which was to extend from the river St. Laurence to that of the Mississippi; but Coligny perished as a Huguenot on the night of the massacre of St. Bartholomew, and his plans were not carried out. In the middle of the seventeenth century Colbert, minister in the earliest and best part of the reign of Louis Quatorze, made great efforts for the extension of French Colonies. Martinique, St. Lucia, Grenada, were purchased from private individuals: in 1661 France possessed Canada, Louisiana, &c.; in 1664 Cayenne was colonized; in 1697 St. Domingo; in 1670 Pondicherry in the East Indies; in 1720 the Isle of France and Bourbon. In the revolutionary war England deprived France of her colonies; St. Domingo was lost by a slave insurrection, and France has not since recovered her former naval power.

If Spain, Portugal, Holland, and France, during the sixteenth and seventeenth centuries deemed the possession of colonies essential to their prosperity, how much more must England have felt their importance, by reason of her insular position and limited territory. Happily for her a monarch was, at an eventful period, on the throne, who stands distinguished in the page of history for the rare discernment she evinced in promoting the welfare of her people and the glory of her country. Elizabeth clearly foresaw that England could neither obtain nor maintain a prominent position among the nations of Europe except by means of her maritime power, which could be insured only by the possession of colonies. Encouragement was, therefore, offered to facilitate the discovery of hitherto unknown regions, and for the planting of new settlements.

In 1591 English vessels first found their way round the Cape of Good Hope, and in 1599 Queen Elizabeth granted a charter for the incorporation of a company of adventurers trading to the East Indies. Towards the close of the 16th century the attention of England was directed to the coast of America. In 1583 Sir Walter Raleigh obtained, by letters patent, a large tract of country which he named Virginia, in honour

of his Sovereign; and in 1584 the first English settlers were sent out by Raleigh to North Carolina, and established themselves on the island of Roanoke; but on the arrival of Sir Francis Drake, in 1586, they quitted the settlement in his vessel. The unfortunate Raleigh made several other attempts to colonize his territory, but they were all unsuccessful; and at the commencement of the 17th century there were no English settlers in any part of the continent of America.

In 1606 letters patent were granted to two companies named the London and the Plymouth. The London adventurers were to establish themselves between 34° and 41° north latitude, and the Plymouth and Bristol adventurers between 38° and 45° north latitude, on the coast of America. Great hardships were experienced by the early settlers from famine, disease, and wars with the Indians; and, in several instances, the attempt at colonization was abandoned. In 1610 the Virginian Colonists were on the eve of quitting Virginia when Lord Delaware, the new governor, arrived with a supply of provisions and 150 men.

During the 17th century the settlements planted on the coast of North America were, in chronological order, as follows:—Virginia, A.D. 1607; New York, which was contended for and alternately occupied by the English and Dutch, from 1614 to 1674; Massachusetts, 1620; New Hampshire, 1623; New Jersey, 1624; Delaware, 1627; Maine, 1630; Georgia, 1632; Maryland, 1633; Connecticut, 1635; Rhode island, 1636; North Carolina, 1650; South Carolina, 1670; and Pennsylvania, in 1682. Some of these settlements owed their origin to enterprizing individuals, others to associations. Maryland was founded by Lord Baltimore who received a tract of country by patent 20th June, 1632. Georgia was granted to a corporation of twenty-one persons. New England was colonized by a congregation of English Puritans. Carolina was vested in a proprietary body, and in 1662 the Earl of Clarendon and seven others obtained from Charles II. a grant of all lands lying between 31° and 36° north latitude. Delaware was originally settled by an association of Swedes and Finns termed the “West India Company,” who were subdued by the Dutch from New York, in 1655, and the latter by the English in 1664. In 1680–82 the whole country was transferred to William Penn by the Duke of York, to whom a large portion of the coast of North America had been granted by his brother Charles II.

In 1776 the thirteen Colonies declared their independence, constituted themselves the United States of America, to which several other States have since been added; and their territory now extends from the frontiers of Canada to that of Mexico, and from the Atlantic to the Pacific

The existing Colonies and possessions of England have been settled or acquired, chronologically, as follows:—Barbadoes (our oldest Colony) in 1605; Bermuda, 1609; Surat Factory 1611; Nova Scotia, 1621; Newfoundland, 1623; Nevis, 1628; Bahamas, 1629; the Gambia and Gold Coast Forts, 1618 to 1631; Antigua, Montserrat, and St. Christophers, 1632; Fort St. George, or Madras, 1654; St. Helena, 1654–5; Jamaica, 1655; Fort William, or Calcutta, 1656; Bombay Island, 1661; the Virgin Islands, 1666; Honduras, 1670; Hudson’s Bay territories, 1670; Gibraltar, 1704; Canada, 1759; St. Vincents, Grenada, Tobago, and Dominica, 1763; Bengal Province, 1768; Prince Edward Island, 1771; Benares Province, 1775; Guntoor and the Circars in Southern India, 1778; New Brunswick, 1784; Penang, 1786; Sierra Leone, 1787. New South

Wales, Australia, 1787; Andaman Islands, 1793; Ceylon, 1795; Trinidad, 1797; the provinces of Tanjore, Canara, Malabar, Wynaad, and Coimbatore, in *Southern*, and of Allahabad, Moradabad, Bareilly, Rohilkund, and the Doab, in *Northern* India, 1799-1800; Malta and Gozo, 1800; Perim Island, 1800; Van Diemen's Island, 1803; British Guiana, 1803; St. Lucia, 1803; Delhi, Agra, Meerut, Hurriana, and Etawah, in *Northern*, and Cuttack, Balasore, and Juggernaut, in *Southern* India; several Mahratta districts in 1803-5; Cape of Good Hope, 1806; Mauritius and Seychelles, 1810; Ionian Islands, 1810-11; the Deccan and Nerbudda provinces, 1818-19; Singapoore, 1819; Arracan and the Tenasserim Provinces, 1824; Malacca, 1826; Western Australia, 1829; Aden, 1838; South Australia, 1834-5; Port Phillip, 1835; New Zealand, 1839; Falkland Islands, 1841; Hong Kong, 1842-43; Scinde Province, 1844; Natal, 1844; Labuan, 1847; Vancouver's Island, 1848; and the Punjaub Province, in 1849.

But a small portion of our possessions have been, in the strict sense of the word, colonized from England. Barbadoes, Newfoundland, Nova Scotia, New Brunswick, Prince Edward Island, Upper Canada, Bermudas, Bahamas, Antigua, Montserrat, Nevis, Virgin Islands, Australasia, and New Zealand, were planted by settlers from Britain; most of our other possessions have been acquired by conquest and cession. Ceylon, the Cape of Good Hope, and Demerara, were taken from the Dutch; Jamaica, Gibraltar, and Trinidad, from the Spaniards; Canada, St. Vincents, Grenada, Tobago, Dominica, St. Lucia, Mauritius, Malta, and the Ionian Islands, were captured from the French; Aden from the Arabs; Hong Kong, from the Chinese, and the Punjaub from the Sikhs.

Although later in the field of colonial enterprise than the neighbouring continental nations, our country advanced slowly, but surely, in the acquisition of colonial or maritime dominions. The North American continent and West India Islands at first engrossed public attention, and, in accordance with the national character, useful rather than showy and specious possessions have, generally speaking, been sought for, and obtained. Agriculture was rightly judged to be the basis of wealth, and the fertility of the soil and a genial climate induced bands of adventurers to migrate to the North American continent. With the growth of maritime commerce and the discovery of tropical countries, arose a taste in Europe for foreign commodities; hence the formation of sugar, coffee, and spice plantations in the West Indies. But agricultural industry, whether under the temperate or torrid zone, was not the only object contemplated; it was rightly foreseen, that the possession within the limits of our own dominion of various foreign products, would furnish lucrative and permanent employment for a large amount of shipping; that our colonists would, by their industry, acquire wealth, and become consumers of home manufactures, and that thus every item of colonial wealth would become, in the aggregate, a portion of the national riches. But in later times, other motives influenced England in the rapid extension of her colonial dominion. On several occasions, during the war with France and Spain, she was compelled, in self-defence, to deprive those nations and their allies of their colonies, as the surest means of weakening their power, and of augmenting her own. At the close of the war in 1814, England had stripped France of every colony she possessed, and had taken all that could endanger her from every other nation with whom she was engaged in hostilities; her fleets swept the ocean fearless

of encountering an European enemy, and her vast colonial commerce enabled her to bid defiance to Napoleon and his Berlin and Milan decrees for the expulsion of our trade from Europe.

The Colonial Possessions belonging to the nations of Continental Europe are—

FRANCE.—*In the West Indies*—Martinique, Guadeloupe, Marie Galante, Desseada, and Cayenne. *In North America*—St. Pierre and Miquelon, near Newfoundland. *In Asia*—Pondicherry, Mahe, and Chandernagore. *In Africa*—Algiers, Bona, Senegal, Goree, Bourbon Isle, and Isle St. Marie in Madagascar.

SPAIN.—*West Indies*—Cuba and Porto Rico. *Asia*—Manilla and the Phillipine Islands. *Europe*—Teneriffe and the Canary Islands.

PORTUGAL.—*Asia*—Goa, Timor, and Macao. *Africa*—Forts on the east coast, at Mozambique, Sofala, Delagoa, Inhambam, Quiloa, and on the Zambize; on the west coast at the Congo river. *Europe*—Madeira, Porto Santo, the Azores, and the Cape Verd Islands.

HOLLAND.—*West Indies*—Curaçoa, Saba, St. Eustatia, Surinam, and part of St. Martin. *Asia*—Java, Sumatra, the Moluccas, Banca, and other possessions in the Eastern Archipelago. A factory in Japan. *Africa*—Some forts on the west coast.

DENMARK.—*West Indies*—St. Thomas, Santa Cruz, and St. John. *Asia*—Nicobar Islands. *Africa*—Forts on the Guinea Coast. *America*—Stations on the coast of Greenland.

SWEDEN.—The Island of St. Bartholomew, West Indies.

The foregoing brief sketch of the progress of colonization sufficiently indicates the importance attached to the possession of colonial dominion by ancient and modern nations; nor can any one examine their history without perceiving how materially their destinies have been influenced by the possession and government of colonies.

SECTION II.

EXTENT, POPULATION, CLASSIFICATION, ADMINISTRATION, AND IMPORTANCE OF THE BRITISH COLONIES AND MARITIME POSSESSIONS.

THE Colonies and Transmarine Possessions of England, of which it is intended to give a history and description, are so vast in their extent, so varied in their position, so diversified in their population, forms of government, products, and capabilities, that it is difficult to convey in few words a just idea of their relative importance; if arranged according to their position in the temperate or torrid zones, a very imperfect estimate would be formed of their capabilities, as the degree of elevation above the level of the sea materially influences the products of the soil; moreover, some territories principally situated in the

temperate zone, may be extended to the tropic, as Australia; some settlements reach from the torrid to the temperate regions, as Hindostan, and British America stretches to the Arctic Circle.

The following is a classification of them according to their Territorial Importance, Commercial Value, and Maritime Position:—

POSSESSIONS COMBINING TERRITORIAL IMPORTANCE, COMMERCIAL VALUE, AND MARITIME POSITION.—Bengal, Madras, Bombay, Scinde, the Punjaub, Assam, Arracan, Tavoy, Tennasserim, Wellesley Province, Ceylon, Malacca, New South Wales, Port Philip, South Australia, Western Australia, Van Diemen's Island, New Zealand, Cape of Good Hope, Canada (Lower), Nova Scotia, New Brunswick, Jamaica, Honduras, Trinidad, and British Guiana.

TERRITORIAL IMPORTANCE.—Canada (Upper), Rupert's Land, Vancouver's Island, Hudson's Bay Territories, Prince Edward Island, Natal, Northern Australia, and other parts of New Holland, the Central Provinces of India, and the Punjaub.

COMMERCIAL VALUE.—Newfoundland, Cape Breton Island, Barbadoes, St. Vincents, Grenada, Tobago, Antigua, Dominica, St. Christophers, Lucia, Nevis, Montserrat, the Bahamas, Sierra Leone, the Gambia, Mauritius, Ionian Islands, Penang, and Singapore.

MARITIME POSITION.—Gibraltar, Malta, Gozo, Bermuda, Virgin Islands, Anguilla, Cape Coast Castle, Accra, Annamaboe, the Falkland Isles, Seychelles, St. Helena, Ascension, Heligoland, Aden, Hong Kong, Labuan, Auckland Islands, and the Andaman, and other islands in the Eastern Seas.

This classification, though perhaps the least objectionable, is still imperfect; for it is evident that several of the West India Islands and other settlements are of political as well as commercial value, by affording secure havens for our shipping; thus, mere fortresses such as Gibraltar, are useful commercial depôts, as well as political positions, and, with few exceptions, all are of some territorial importance from their rich and productive soil.

Geographical Position of our Maritime Possessions and Dependencies:

IN ASIA.—Bengal, Madras, Bombay, Scinde, the N.W. provinces of Hindoostan, the Punjaub, Assam, Arracan, Tavoy, Tenasserim, Wellesley Province, and Malacca; the Islands of Ceylon, Penang, Singapore, Labuan, Hong Kong. Area (in round numbers) seven hundred thousand square miles; population about one hundred and twelve million. In addition to this territory actually belonging to the British crown in Asia, there are tributary states extending over half a million square miles, and containing more than fifty million people.

IN NORTH AMERICA.—The Canadas (Upper and Lower), Nova Scotia, New Brunswick, and Cape Breton, and the Islands of Prince Edward, Newfoundland, and Vancouver's and Queen Charlotte; with an area of more than half a million square miles, and two million inhabitants. We have also on the continent of N. America, the territories belonging to, and under the control of, the Hudson Bay Company, extending from the northern frontiers of Canada to the Frozen Ocean, and from the Atlantic to the Pacific, which comprises upwards of three million square miles, and a population of about one hundred and twenty thousand.

IN SOUTH AMERICA.—Demerara, Essequibo, and Berbice; Honduras and the Falkland Islands. Area about two hundred thousand square miles; population one hundred and fifty thousand.

IN THE WEST INDIES.—The islands of Jamaica, the Caymans, Trinidad, Tobago, Barbadoes, St. Vincents, Grenada, Antigua, St. Lucia, Dominica, St. Christophers, Nevis, Montserrat, Anguilla, Tortola, and the Virgin Islands, Providence, and the Bahamas, and the Bermudas. Area about twenty thousand square miles; population nearly one million.

IN AFRICA.—The Cape of Good Hope and Natal, the Mauritius and Seychelle Islands, Aden (in Arabia), Sierra Leone, the Gambia, Cape Coast Castle, Accra, and Annamaboe, the Islands of St. Helena and Ascension. Area, four hundred thousand square miles; population eight hundred thousand.

IN AUSTRALASIA.—The great Island of Australia, or New Holland, which contains the settlements of New South Wales, Port Philip, South Australia, Western Australia, or Swan River, Northern Australia or Port Essington; Van Diemen's Island, New Zealand, Norfolk Island, and the Auckland Islands. Area more than three million square miles; population half a million, of whom 325,000 are Europeans and their descendants.

IN EUROPE.—Gibraltar, Malta, Gozo, Corfu, Cephallonia, Zante, Santa Maura, Ithaca, and Cerigo, in the Mediterranean; and Heligoland in the German Ocean. Jersey, Guernsey, Alderney, and Sark, have been held as fiefs of the Crown since the reign of William the Conqueror. The area of these territories and dependencies is about fifteen hundred square miles; population nearly half a million. Total area, *eight million* square miles; population* about *one hundred and twenty million*.

The numerous, intelligent, and industrious population inhabiting the British transmarine territories are as varied in their appearance, character, language, and religion, as the diversified regions in which they dwell. British India possesses a greater variety of races than the continent of Europe. Some of the subjects of the Crown in the East are bold and warlike, others timid and peaceful; some of olive hue, with Roman noses and flowing hair, others have the negro characteristics; some use a polished language, others a barbarous jargon; some are Monotheists, others sunk in the grossest idolatry; some generous and confiding, others treacherous and distrustful. Even in the island of Ceylon there are three races—the Coast Cingalese, the Kandians, and the aborigines or Vedhas. In some of our Eastern possessions Malays predominate; in others, as at Singapore and Hong Kong, Chinese constitute the mass of the population. A fine race, termed the Parsees, or Guebers, settled in Bombay from Persia, and many Armenians reside in Calcutta. Jews dwell in several of our Indian settlements. In the W. Indies there are nearly a million negroes of African descent, and in Guiana and Honduras several aboriginal tribes still remain. There are also in our western colonies many Mulattoes, the offspring of the white and dark-coloured races. The purely white race are few in number, and descended from the English, French, Spanish, Dutch, and Portuguese in the West Indies.

In British N. America there are about two million white inhabitants, of whom six

* In this and other places round numbers are used as best suited to a general summary of facts;—the latest official figures will be given in the body of the work.

nundred thousand are of French descent, and the remainder of the Anglo-Saxon race. There are also about one hundred thousand Indians in the territories confided to the management of the Hudson's Bay Company.

In South Africa, the British subjects are Dutch, English, Hottentots, Caffres, &c. At the Isle of France and Seychelles, principally French; at Aden, Arabs; on the W. coast of Africa, negroes.

In Australasia there are about three hundred and twenty-five thousand of the Anglo-Saxon race, and no other European blood; there are probably one hundred thousand New Zealanders, a fine race; and scattered savage hordes, in Australia. At Gibraltar, there is a medley of many Mediterranean and African races. At Malta, a peculiar population, partaking of the characteristics of the various nations under whose dominion the island has passed. In the Ionian Islands, the inhabitants are principally Greek, with some Venetian blood; in Heligoland, German; and in the Norman, or Channel Islands, French.

The languages spoken throughout the British empire, are English, French, Italian, Dutch, Spanish, Portuguese, Greek, Persian, Arabic, Maltese, Chinese, Armenian, Hindoostanee, Bengallee, Mahratti, Tamul, Teloo goo, Carnatica, Ooria, Singalese, Malay, Burmese or Assamese, Hottentot, Kaffre, Negro, New Zealand, and various barbarous unwritten tongues. There are about 5,000,000 Christians in our foreign possessions, including the Lutheran, Latin, Greek, and Syriac churches. There are about 50,000,000 Hindoos, professing the religion of Brahm or Brahma; about 20,000,000 Mahomedans; about 10,000,000 Buddhists, or Jains; a small number of the Zoroaster creed; and the remainder are idolaters of various descriptions.

The other less striking diversities which distinguish the population of an empire exceeding in extent, opulence, and power, Rome in her palmyest days, are deserving of some consideration. The distinction between free and bond—to the honour of Christianity—no longer exists; that fearful outrage on humanity has, to some extent, been redressed, at a cost of £20,000,000 sterling; and in recording the millions of inhabitants congregated within the pale of a single government, the historian cannot but rejoice that he speaks of freemen and not of slaves.

Climate, food, and drink, as well as religion, laws, and language, produce differences in thought, feeling, and action. The Indo-British subject, living on the verge of the Himalaya mountains, is a totally different being from his fellow-citizen dwelling in the flat regions of Bengal. The Mussulman of Calcutta, who eats animal food, possesses far more energy and intelligence than the Hindoo dwelling in the same city who lives on rice and water. The ponderous brandy-drinking boor of South Africa, is a totally different man from the vivacious French Canadian, on the banks of the St. Laurence. A wide difference is invariably found to exist between the denizens of a low, hot, and damp region, and those of an elevated, cool, and dry atmosphere; varieties of food and drink produce equally distinctive effects. Estimating the whole population of the British Empire at 130,000,000, not more than 26,000,000 consume flesh abundantly; about 10,000,000 eat of it sparingly; 24,000,000 occasionally partake of it, and 70,000,000 live principally on vegetables and fish. Wheat, oats, and barley constitute the principal gramnivorous food of about 34,000,000; potatoes, pulse, and other vegetables, of about 16,000,000; and

rice, maize, millet, and several minor grains, of about 80,000,000 people. With regard to fermented or distilled drink, about 10,000,000 use wine frequently, 25,000,000 malt liquors, 35,000,000 distilled liquors, and about 60,000,000 confine themselves chiefly to aqueous beverages. About one-half the population of the British empire reside within the temperate, and the other half within the torrid zone.

These facts shew that the British is far from being a homogeneous empire; they indicate the great care required even in the application of ordinary rules, much more in the adaptation of abstract principles to vast and varied masses of men under different degrees of civilization.

It may be necessary to offer a succinct view of the home administration of our maritime possessions.

The whole of the British territories on the peninsula of India, and the settlements of Penang, Malacca, and Singapore, are under the management of the East India Company, whose delegated trust expires in 1853-54. The affairs of the East India Company are managed by a court of twenty-four Directors, and controlled by the India Board, which is presided over by a cabinet minister representing the Crown, who has under him a working department distinct from that maintained at the East India House. The India Board consists of the President, of paid or unpaid Commissioners (whom the Crown may nominate), and of the two principal Secretaries of State and the Chancellor of the Exchequer, who always, *ex officio*, form three of the unpaid Commissioners of the India Board. There are two Parliamentary Secretaries to the Board, and the Clerks are divided into judicial, revenue, political, and other departments. There is a permanent Secretary of the Board, and a Librarian.

The Court of Directors of the East India Company are elected by the proprietors of East India stock, and presided over by a Chairman and Deputy Chairman annually chosen by the Court, which is divided into judicial, revenue, and other committees. The secret Committee, consisting of the Chairman, Deputy Chairman, and Senior Director, confer on all matters of importance with the President of the India Board. The patronage, consisting of the appointment of writers or civil servants, military cadets, surgeons, and chaplains, is annually divided into thirty shares, of which the President of the India Board, and Chairman and Deputy Chairman of the East India Company have each two shares; and each Director of the East India Company, one share. In India promotion, both in the civil and military service, goes chiefly by seniority. Staff appointments rest with the Commander-in-Chief, and high political trusts are in the appointment of the Governor-General. In England the President of the India Board has, under the advice of Her Majesty's ministers, the appointment of Commander-in-Chief of the Anglo-Indian army, and of Judges and Bishops. Her Majesty's government also possess a *veto* on the nomination (by the Directors of the East India Company) of Governors-General, Governors, and Members of Council. The Court of Directors may, however, recall a Governor-General without the consent of the Crown. The India Board, on behalf of the Sovereign, exercises a controlling power in revising all despatches prepared by the Court of Directors and addressed to the governments in India, at Bengal, Madras, Bombay, &c., and the Board alone sanctions increased expenditure at home or abroad. It also possesses an *originating* power of requiring the Court of Directors to prepare a despatch on any

named subject, of altering such despatch as it may seem fit, and of enforcing its transmission to India by a mandamus from the Court of Queen's Bench at Westminster. The joint power of the Court and Board is exercised in framing laws for the government of India, and in approving or annulling the enactments made in India by the local governments.

The Hudson's Bay territories in North America have been confided to a chartered body called the "Hudson's Bay Company," since 1670. To this company, in 1848, has also been confided the colonization of Vancouver's Island. The powers entrusted to this Corporation and its mode of working will be detailed when describing the territories under their rule.

The Norman or Channel Islands have their respective legislatures under the supervision of the Secretary of State for the Home Department.

All the other colonies are in charge of the Colonial Secretary, and may be divided into three classes:—1st, Those having a Representative Assembly, a Legislative Council nominated, and a Governor also appointed, by the Crown. 2nd, Those having *no* Representative Assembly, but a Legislative Council and Governor. In some colonies of this class the members of the Legislative Council are partly nominated by the Crown, and partly elected by the colonists. 3rd, Those having neither an Assembly or Council, but only a Governor, such as Gibraltar. In many instances there is also an Executive Council, composed of the principal servants of the crown. The Secretary of State for the Colonies is a cabinet minister of the highest rank, and during war he represents the military department of the government in the cabinet; he has the nomination of the Parliamentary Under-Secretary of State for the Colonies, who retires with him on a change of administration; he acts always in the name of the sovereign, whom he is supposed to consult previous to taking any important step; and he is bound to submit to his colleagues in the cabinet measures of importance previous to their final arrangement. Colonial charters and other questions may be referred by the Secretary of State to a department of the Privy Council for trade and plantations. Emigration and land sales in the colonies are confided to the management of three Emigration Commissioners, acting under the orders of the Secretary of State. The permanent department of the Colonial Office consists of two Under Secretaries (one of whom is law adviser on colonial subjects to the Secretary of State) of a chief, and several head clerks, gentlemen of great ability and much general experience, to each of whom is confided a group of colonies, according to their geographical position; several assistant or subordinate clerks and writers, and a librarian or registrar, to whom is entrusted the custody, arrangement, and preparation for printing of public papers.

The patronage of the Secretary of State consists in the nomination of the Governors, Lieutenant-Governors, Commanders-in-Chief, Judges, Bishops, and Church Dignitaries, Law Officers, Secretaries, Treasurers, Auditors, and civil functionaries of every description in the colonies; also the members of the Colonial Executive Council, and the Crown members of the Colonial Legislative Councils; he likewise fills up vacancies in the Emigration Commission, and such as may occur in his own office in Downing-street, where the principle of seniority is not involved.

The power of the Imperial Parliament is exercised in framing constitutions for the colonies, or laws applicable to one or more of our possessions; in the appointment of select

committees to inquire into grievances, or procure information; and in addressing the crown on any subject requiring attention.

Parliament may suspend the constitution, alter, abridge, or extend the functions of any Colonial Legislature: the House of Commons may also interfere in the internal taxation of colonies not possessing Legislative Assemblies; and, as a high court of judicature, the House of Lords may try any governor, or other functionary, impeached by the Commons.

Acts of the Colonial Legislatures, unless disallowed by the crown or parliament, within two years, become permanent laws. The crown, through its representative, sanctions the introduction of money bills into the colonial assemblies. A department of the Privy Council investigates colonial matters referred to its jurisdiction by the Secretary of State for the Colonies.

The Colonies of England were formerly under the management of a board, to whose care was confided the trade and plantations of the kingdom. On the abolition of the Plantation Board, and the office of third Secretary of State, on the economical motion of Mr. Burke, after the loss of our American possessions, the remaining colonies were transferred to the care of the Secretary of State for the Home Department. On the breaking out of the revolutionary war at the close of the last century, a Secretaryship of State for War was created, and to this department the control of the colonies was confided in 1801. Since then our colonies have been largely augmented, and it has become a question, whether the Home Administrative Department for their management in England does not require enlargement and modification.

In 1837 the writer of this work petitioned the House of Commons on the subject, pointing out the difficulty of exercising a wise and satisfactory rule over numerous and distant transmarine territories, through the medium of a single chief, who was changed with every party majority in the House of Commons,—urging, that within three years there were five different Secretaries and five Under-Secretaries of State for the colonies, whose brief duration of office rendered it next to impossible for them, however great their talents or energies, to enter fully into the various and complicated questions connected with our colonies; and suggesting, therefore, that it might be advisable to constitute a *Colonial Board* or *Council* to assist the Secretary of State,—such Board to be composed chiefly of governors, and other servants of the crown. An effective measure of this nature, which may be adopted without any additional expense to the British Exchequer, might avert the necessity of yielding to extreme and unconstitutional propositions. A Colonial Board, such as that of the Treasury, Admiralty, &c., composed of members possessed of local knowledge, as well as general ability, if permanent, would mitigate, if not altogether remove the evils now unavoidably resulting from the frequent change of the Secretary of State, whose labours are exceedingly arduous and responsible.

This is not the place to enter into any examination of possible retrenchments in Colonial Expenditure, civil or military. The whole sums voted by Parliament for the *civil* expenditure of the colonies in 1849, derived from the revenues of Great Britain, were, in round numbers,—Bahamas, £300; Bermuda, £4,000; Prince Edward Island, £2,000; Western coast of Africa, £13,000; Western Australia, £7,400; Port Essington, or Northern Australia (about to be abandoned), £1,700; New Zealand, £20,000; Heligoland, £1000,

Falkland Islands, £5,700; Hong Kong, £25,000; Labuan, £10,000; governors and others in the West Indies, £18,000; St. Helena, and retired servants of East India Company, £17,000. *Total* £125,000. Clergy in N. America, £11,500; Indian department, Canada, £14,000; Justices or Stipendiary Magistrates in the West Indies, Mauritius, &c., £41,000; Militia and Volunteers in Canada, £16,000; Emigration department, £13,000; Colonial Office, £37,000. *Total* £133,000.—Thus it will be seen that the total civil charges of the whole of our colonies defrayed out of the Home Exchequer, directly or indirectly, permanently or temporarily, is about a quarter of a million sterling.

The people of British India provide *the whole* of the civil and military charges of Hindoostan, defray annually the expenses of twenty to thirty thousand of the Queen's troops; the cost of the Court of Directors of the East India Company in Leadenhall-street, and of the India Board in Westminster. The convict expenditure in Australia and Bermuda is about £225,000 a-year, but this outlay results from vice and crime in the United Kingdom, and is not chargeable to our colonies. The total military cost for the pay and commissariat of the Queen's troops in all our colonies was, for the year 1847: pay, £1,503,059, commissariat, £670,142 = £2,174,059. Of this sum £603,718 was for the Cape of Good Hope during the Kaffre war.

In some of the colonies there are local corps, as in the West Indies, Ceylon, and Malta. There are militia corps in several of our settlements; those of our N. American Colonies comprise 339,139 men.

It is deserving of consideration, with regard to our military expenditure in the colonies, that England is obliged to maintain a standing army; which, considering the extent of the standing armies of all European nations, it is a grave question, whether it would be prudent in us materially to reduce.

But, as the constitutional jealousy of a free country objects to the presence of a soldiery which might be made the instruments for wielding despotic power, it is well that those troops should be scattered in different colonies, inured to privation, seasoned in various climates, and ready on any emergency for effective service.

A similar remark applies to the Royal Navy, which our insular position and wide extended commerce requires to be maintained in considerable force. The possession of strongholds and havens in every part of the globe enables us to dispense with the large amount of naval strength that would otherwise be requisite; and our seamen are rendered perfect, and retained in a high state of discipline by being stationed for three or four years on the shores of the distant colonies, in various climates, and amidst many dangers, yet always among their own countrymen, and losing nothing therefore of their nationality.

The shipping registered as sailing-vessels, in the British Colonies in N. America, Australia, Africa, and the West Indies, amounts to half a million tons, and the steam-vessels to sixteen thousand tons. The British shipping cleared out of the ports of the United Kingdom for the British possessions alone, in 1847, amounted to more than *two million tons*. Steam communication has now brought the most distant parts of the empire into close, frequent, and regular intercourse. Mails and passengers arrive in ten days from our North American Colonies, in twenty from the West Indies, in thirty days from the East Indies, in fifty from China; and, according to a new line, they will arrive in sixty days from Australia. This diminution of time or distance between the parent state and

her possessions will greatly tend to consolidate the empire. Lord Brougham, in his able work on "Colonial Policy," has well described the beneficial effects of frequent international communication in the following words:—"The only constant, regular, and extensive intercourse, arising from the circulation of inhabitants, is that which is carried on between the different provinces of the same empire, either contiguous or remote—between the country and the towns—the provinces, or provincial towns, and the capital—the districts of industry and self-denial, and the seats of opulence and pleasure—the mother country and her colonies. This intercourse and circulation tends, more than any other thing, to preserve the connexion of the different component parts of a great and scattered empire, and to cement the whole mass."

The colonies yield us a *certain* supply of necessities and luxuries which no foreign war or hostile tariffs can lessen. Of 7,000,000 cwt. of sugar imported, our colonies furnish 5,500,000. They send us also 35,000,000 lbs. of coffee, 4,000,000 lbs. of cocoa, 7,000,000 gallons of rum, 1,000,000 lbs. of cinnamon, 6,000,000 lbs. of pepper, 2,000,000 gallons of vegetable oils, 8,000,000 lbs. Indigo, 40,000,000 lbs. of wool (sheep), 100,000,000 lbs. of cotton wool, 1,000,000 lbs. of silk, 1,000,000 cwt. of rice, 1,000,000 loads of timber; also corn, provisions, flax, hemp, hides, skins, saltpetre, gums, drugs, dyes, metals, &c., all capable of indefinite increase. In fish alone Newfoundland has contributed to the empire to the value of about £200,000,000, a richer wealth than the South American mines yielded to Spain.

The exports of manufactured articles from the United Kingdom to the colonies nearly equals our whole exports of similar articles to every part of the globe. Mr. Disraeli stated in Parliament, on July 2, 1849, that "in the article of *calicoes alone* there has been an export to the British Colonies, from 1831 to 1846, of 313,000,000 yards more than to all the rest of the world:" and it must be remembered, that a colonial trade is even more valuable than a home trade, because not only are the two profits on buying and selling obtained by the citizens of the same empire, but a large and valuable amount of shipping is employed

British India and Ceylon consume annually British and Irish produce and manufactures of the value of £6,000,000; N. American colonies, £4,500,000; West Indies, £3,500,000; Australian Colonies, £2,000,000; the African settlements more than £2,000,000; the European and other settlements, require for use or sale, about £2,000,000. Our colonial export trade therefore amounts to £20,000,000 a year, and is annually increasing. This commerce, in a national point of view, is double the value of an equal amount of foreign commerce, for the reasons above stated; namely, that the whole profits thereon accrue to the empire, and are in no way divided with foreign states.

Much of our foreign trade may be, and indeed often is, carried on at a loss. When goods accumulate in the warehouses of our great hives of industry, in Lancashire and Yorkshire, they must be sold at any sacrifice; and the difference between the cost and sale price is made up out of the profits on the home and colonial trade. The extent of foreign trade is not an infallible criterion either of individual or national wealth. It is often difficult for exporters to realize in cash, or otherwise, the value of goods sent to a foreign country; but in our colonies goods are consigned to corresponding firms;

or, there are English courts of law there for the ready recovery of debts. Moreover the Metropolitan-Colonial Banks established in London, since 1834, such as the "Australian," "British North American," "Colonial W. I.," "Oriental," "Ceylon," "Ionian," &c., render the remittance of money between England and her colonies as easy and secure as between London and Liverpool. The increasing value of our Colonies is thus shown by T. F. Elliot, Esq., Under-Secretary of State for the Colonies:—

	A. D.	Population.	Imports.	Exports.	Value of Imports per head.	Value of Exports per head.
Old American Colonies (in 1773) . .	2,312,000	£1,000,000	£1,800,000	£0 8 8 . .	£0 15 6	
Australian Colonies (in 1845) . .	283,873	£2,070,000	£2,189,000	£7 5 10 . .	£7 14 3	

The duties levied in foreign countries on British produce and manufactures, vary from ten to *fifty* per cent.; but in New South Wales, South Australia, Van Diemen's Land, New Zealand, Ceylon, Mauritius, Cape of Good Hope, Sierra Leone, &c., British manufactures of woollen, cotton, and silk are received as *free of all duties* as if transmitted from one part of the United Kingdom to another. In our North American Colonies, the duty on British manufactures is 5 to 7, in the West Indies 3 to 4, and in British India but 3 per cent. The consumption of British produce and manufactures in our colonial possessions, ranges from two to ten pounds sterling per head annually; in the United States of America, our best foreign customers, the average is under ten shillings a head annually. It has been said that colonies must become useless as commercial markets under what is termed "Free Trade." But it may also be urged that "free imports" do not constitute free trade;—that the United States and European nations do not admit British and Colonial produce and manufactures on the *same terms* as England admits their products into the United Kingdom and its dependencies;—that since the adoption of our tariff of free imports in 1846-7, no nation has entered into reciprocal arrangements,—in some instances foreign tariffs have been increased, and that but for the revolutionary state of Continental Europe during 1848 and 1849, by which the manufactures and commerce of the revolutionary countries have been suspended or deranged, it may be doubted whether the newly-adopted system could have been maintained. An European war, the blockade of important rivers, such as the Elbe or Scheldt, the occupation of the territory of a commercial ally, as that of Mexico by the United States, all tend to the diminution of our precarious foreign trade; but a colonial traffic is always within our own control, both for the consumption of British manufactures and for the supply of food and of raw products; and the time is probably not far distant when England and her maritime dependencies will be included in one commercial league, with as perfect freedom of trade as if no ocean rolled between them.

The imperious expression of Napoleon when seeking the destruction of England, and unable to accomplish it by the means in his possession, was—"I *must have ships, colonies, and commerce!*" The sagacious Talleyrand also, when urging France to acquire and maintain colonies as the best mode of sustaining a fleet which might "reach the vitals of England," declared, that colonies were the sheet anchor of Britain—the support of her navy—the fortress of her power: "*Render these useless,*" said Talleyrand, "*or deprive her of them, and you break down her last wall—you fill up her last mouth.*" "Whatever," said Talleyrand, "gives colonies to France, supplies her with ships and

sailors, manufactures, and husbandmen. Victories by land can only give her mutinous subjects, who, instead of augmenting the national force by their riches or numbers, contribute only to disperse or enfeeble that force; but the growth of colonies supplies her with zealous citizens, and the increase of real wealth and effective numbers is the certain consequence."

Napoleon, in one of his prophetic moments at St. Helena, truly remarked, "England should look wholly to commerce and to naval affairs; she never can be a continental power, and in the attempt must be ruined: let her maintain the empire of the seas, and she may send her ambassadors to the courts of Europe, and demand what she pleases."

There are other forcible reasons which enhance the value of the Colonies; especially the existing density in England of four hundred mouths on each square mile of arable surface, and a population still further increasing in the United Kingdom at the rate of nearly a mouth every minute, or upwards of one thousand a day beyond the deaths, which makes emigration a matter of state policy as well as individual necessity, if we would avert the evils of a social or servile war, which is inevitably caused by an excess of inhabitants in any country.

If England had no foreign possessions or waste lands, the extrusion of the excessive population might be the sole object, even if the surplus went to enrich and strengthen a rival state; but when there are millions of acres ready for the plough in different parts of the empire, it seems suicidal to transfer, or suffer to be transferred, to another nation, the blood and bone of our own. Of the two million emigrants who have quitted the United Kingdom within the last twenty-four years, four-fifths have strengthened the power and added to the wealth of the United States of America. When emigration is left to itself, men of small capital, the bold and the energetic, are the first to quit their native home; society thus becomes weakened, and less able to bear with accumulating difficulties; the pressure on the labour market, which alone required relief, is increased by the departure of the employers of labour; capital, unable to find secure and profitable investment at home, seeks its interest in foreign lands; the mysterious link which unites national with individual weal is destroyed; a democratic spirit looks to political changes for social amelioration; and the whole frame-work of society becomes unhinged. A state paper addressed by Lord Bacon to James I. in 1606, contains reasons for emigration, and for the planting of new settlements, which well deserve consideration in the present day. "An effect of peace in fruitful kingdoms where the stock of people receiving no consumption nor diminution by war doth continually multiply and increase, must, in the end, be a surcharge or overflow of people more than the territories can well maintain, which many times insinuating a general necessity and want of means into all estates, doth turn external peace into internal troubles and seditions. Now what an excellent diversion of this inconvenience is ministered to your Majesty in this plantation of Ireland (colonies), wherein so many families may receive sustentation and fortune, and the discharge of them out of England and Scotland may prevent many seeds of future perturbation; so that it is as if a man were troubled for the avoidance of water from the places where he had built his house, and afterwards should advise with himself to cast those floods, pools, or streams for pleasure, provision, or use. So shall your Majesty in this work have a double commodity in the avoidance of people here, and in making use of them there."

Our Colonies offer a noble field for British industry. They could sustain with ease an addition of one hundred million to their present population. In the Canadas there are not *six* individuals to each square mile of area, in Australasia not *three*, in Southern Africa not *two*. Wordsworth's beautiful lines are peculiarly appropriate at the present time:—

“ As the element of air affords
 An easy passage to the industrious bees,
 Fraught with their burdens; and a way as smooth
 For those ordained to take their sounding flight
 From the thronged hive, and settle where they list—
 In fresh abodes their labour to renew :
 So the wide waters open to the power,
 The will, the interests, and appointed needs
 Of Britain, do invite her to cast off
 Her swarms; and, in succession, send them forth,
 Bound to establish new communities
 On every shore whose aspect favours hope,
 Or bold adventure; promising to skill
 And perseverance their deserved reward.
 Change, wide and deep, and silently performed,
 This land shall witness; and, as days roll on,
 Earth's universal frame shall feel the effect,
 Even to the smallest habitable rock
 Beaten by lonely billows, hear the songs
 Of harmonized society, and bloom
 With civil arts that send their fragrance forth,
 A grateful tribute to all-ruling Heaven.—*Book IX. Excursions.*

From seven to eight million sterling are now annually expended in the United Kingdom in the support of two million paupers; if a portion of that sum were appropriated towards the conveyance of a part of the able-bodied poor to the less populated parts of the empire, a grievous burthen, which is now weighing down the energies of the country, would be converted into a source of wealth and strength to the nation; unprofitable consumers would become producers of food and other exchangeable articles, demanding in return British manufactures, and the waste lands of the Crown would become sources of national and individual prosperity. Two hundred million sterling have been levied by law and expended for the relief of the poor in England and Wales, between the years 1815 and 1849. The sum which it costs to maintain a pauper in England would convey him to another part of the Empire, where he might in the same space of time be a useful consumer instead of a waster of capital.

Every tree felled, every acre cultivated, in our Colonies, furnishes additional employment for the looms, shipping, and commerce of England; and our rich possessions in the East and West Indies are capable of furnishing an inexhaustible supply of tropical and other products, so much in demand throughout Europe and America. By judiciously directing the stream of emigration where it may fertilize our own waste lands, we not only provide for the immediate exigencies of a superabundant population, but we preserve to ourselves the main element of national strength, and thus render it conducive to the permanent welfare of the Empire.

China, Japan, Corea, Cochin China, and Siam—containing nearly one-half the population of the globe, are scarcely yet known to us; and our possessions in the Pacific and Indian Oceans may be the means of opening the door for extensive intercourse with those vast regions.

Again, the Colonies afford a wide sphere of action for enterprising or restless spirits, who, with good education but limited means, are desirous of improving their condition. How many young men of good family, and of industrious habits, have found honourable and lucrative employment in the East and West Indies, North America, Australia, &c. The East Indian and Colonial Civil Services contain many able and distinguished servants of the crown, whose minds, expanded by their position, fit them for the government of an empire; and the Anglo-Indian army of two hundred thousand men is commanded by military officers whose science, skill, and prowess is unsurpassed by that of any other army in the world.

There are few counties in the United Kingdom in whose soil wealth acquired in the colonies has not been invested. British India alone, in payment of military, civil, and other charges, pensions, &c., has remitted to England in bullion and produce at least three millions sterling per annum for the last fifty years, making the enormous sum of £150,000,000. Sir Charles Forbes, whose name is revered at home, and almost worshipped in India by the affectionate and grateful people of that vast country, as the just, generous, and unswerving advocate of their interests, declared in Parliament, when deploring the lamentable inattention too generally evinced to their welfare, and the absence of a policy conciliatory to their feelings, that "*the wealth which England has obtained from the natives of India would, at compound interest, pay off the National Debt!*" The balance of trade, the private fortunes made abroad, and the savings of civil and military men, are, generally speaking, spent "at home."

By means of her colonies England is enabled to assume a high national position; and should, unfortunately, a general European war arise, she is independent of every foreign country for the supply of the necessities or luxuries of life, or for the raw materials required for her manufactures.

In estimating the political value of our colonies, it must not be forgotten that their possession gives an enlarged tone even to the minds of those who have never quitted the shores of Britain. Mere islanders, whose views and thoughts are limited to the narrow territory in which they dwell, acquire contracted ideas, unsuited to the policy of a great nation; but England exists in each quarter of the globe—her people become familiarized with the distant regions of the earth, and a national spirit is fostered, eminently conducive to the creation and preservation of a vast empire.

Throughout the greater part of the globe a stupendous moral, as well as political, revolution is working for some great end. England is not only the heart of a mighty empire, whose branches and roots extend to the uttermost parts of the earth, she is also the "nursing mother" of nations yet in their infancy, and on her righteous fulfilment of this responsible duty, depends alike their future welfare and her own. If true to her trust, she may, under Divine Providence, be the instrument of establishing peace—extending civilization—and disseminating the inestimable blessings of Christianity throughout the world.

R. M. MARTIN.

THE BRITISH COLONIES.

BRITISH NORTH AMERICA.

BOOK I.—EASTERN AND WESTERN CANADA.

CHAPTER I.—HISTORY.

THE British dominions in North America comprise an area of 4,000,000 square miles: their extreme length between east and west, from the Atlantic to the Pacific, is 3,000 miles; and from north to south, 2,000 miles. The boundaries of this vast region are, on the *north* the Arctic Ocean and the adjacent seas and islands, many of them yet unexplored; on the *north-west*, Russian America; on the *west*, the Pacific Ocean; on the *south*, the territories of the United States; and on the *east*, the Atlantic Ocean.

The southern boundary is defined (see map) by an irregular line drawn from the extreme end of Vancouver's Island, extending along the parallel of 49° N. to the head of Lake Superior, thence through the centre of that lake and the centres of Lakes Huron, St. Clair, Erie, the Falls of Niagara, and Lake Ontario, to St. Regis on the St. Lawrence, 60 miles S. W. of Montreal, thence along the parallel of 45° N. to some Highlands, which divide the waters that flow into the Atlantic from those that flow into the St. Lawrence; from thence to the source of St. Croix, and to the mouth of that river in Passamaquoddy Bay in the Gulf of Fundy. The whole country lies between the parallels of 41° 47' and 78° or 80° N., and the meridians 52° and 141° W.

The British territory is divided into the provinces or districts known as the Canadas, Eastern and Western, or Upper and Lower; New Brunswick, Nova Scotia, Cape Breton, Prince Edward Island, Newfoundland, the Coast of Labrador, the Hudson's Bay Ter-

ritories, Vancouver's Island, Queen Charlotte's Island, and other islands and districts west of the Rocky Mountains, each of which will be separately described.

The statements of the Norwegians, or Danes, having visited the coast of America in the tenth and eleventh centuries, and colonized "*Vinland*," or New England, are too vague and unsatisfactory, to deprive Columbus of the honour of having been the first discoverer of the western hemisphere on the 11th of October, 1492. But the explorations of this truly great man were restricted to the West India Islands and a portion of the middle and southern part of the adjacent continent, which received its name from Amerigo Vespucci, who, in 1499, visited some parts of the coast. The discoverer of the northern portion of the continent of America was Giovanni Gaboto, generally called John Cabot, a Venetian, in the service of Henry VII. of England, who, with his three sons, sailed from Bristol in May 1497, having under his command two caravels and five ships laden with goods for traffic, supplied by the merchants of London. Cabot sailed to the westward in the expectation of reaching "*Cathay*," or China; but to his surprise, on the 24th of June, 1497, made the coast of America, discovered Newfoundland, sailed as far N. as 67° 30', in hope of finding a passage to the Pacific; then steered to the southward, and entered the Gulf of St. Lawrence in search of a supposed north-west passage. After taking possession of the country in the name of

England, Cabot returned in August, 1497, with ten natives (whom he brought from Newfoundland or Prince Edward Island), and was knighted by the king. Sir John Cabot made three subsequent voyages, but no settlement then took place on this part of the North American continent; the tide of European adventure being directed to Mexico and Peru by the Spaniards.

In 1500 Gaspar Cortereal, a Portuguese captain, visited the north coast of America, followed the track of Sir John Cabot, and kidnapped several of the Indians or natives, whom he sold as slaves. In 1502 Hugh Elliot and Thomas Ashurst, English merchants, were authorized by Henry VII. to establish Colonies in the countries discovered by Cabot; but they do not appear to have availed themselves of this permission. In 1518 Baron de Lery, a Frenchman, landed cattle at Isle du Sable, and ineffectually attempted to form a settlement at Canseau. In 1525 Giovanni Verrazano, a Florentine, and Gomez, a Spaniard, in an expedition fitted out by Francis the First, coasted from Newfoundland to Florida, landed in Nova Scotia, proceeded as far as 50° N., and, regardless of the prior claim of England, took formal possession of the country for his royal master, under the title of "*La Nouvelle France*." Verrazano, like Cabot, returned without gold or silver, was coldly received, and died in obscurity. Henry VIII. in 1527 fitted out an expedition to discover a north-west passage to the East Indies: one of the ships was lost, and no settlement was made.

The valuable fisheries on the banks of Newfoundland had early attracted the attention of European nations, and in 1517 there were about fifty vessels under the English, French, Spanish, and Portuguese flag engaged in the fisheries. In 1534 Jacques Cartier, a navigator who had been fishing on the banks of Newfoundland, received a commission from Francis the First; sailed with two vessels of 60 tons each from St. Maloes, April 20; arrived at Newfoundland, May 10; remained there ten days, then sailed to the northward; subsequently took a southerly course, passed through the Straits of Bellisle, traversed the Gulf of St. Lawrence; on the 24th of July erected a cross surmounted by a *fleur-de-lys*, and on the 25th of July sailed for France, taking with him two Indians.

Cartier was well received, and sent by his sovereign in the ensuing year to the St. Lawrence. (so called on account of its dis-

covery on the day of the festival of that saint) with three larger vessels, and accompanied by a number of young gentlemen as adventurers. The explorers entered the river St. Lawrence in August, and anchored off Quebec, then called Stadaconna, and the abode of an Indian chief, named Donnaconna. Cartier here quitted his ships and proceeded up the river in boats. On the 3rd of October, he reached an island, which he named *Mont Royal* (now Montreal), returned to his ships, where he wintered, called the coast St. Croix, and in 1536 seized Donnaconna, and two other chiefs, and conveyed them with eight natives to France, where they all died. The precious metals not having been discovered, the French sovereign made no further efforts to occupy the country until 1541, when an expedition, at the renewed entreaties of Cartier, was sent out to colonize La Nouvelle France, or Canada, so called from the Iroquois word *Kanata*, signifying a collection of huts, which the early discoverers mistook for the native name of the country. Francis I. gave the command of the expedition to François de le Roque, Siegneur de Roberval, who was appointed the viceroy of his sovereign in Canada, Hochelaga (Montreal), &c. In July, 1542, the viceroy arrived in Canada, built a fort about four leagues above the Isle of Orleans, but the destructive effects of scurvy which appears to have afflicted all the early colonists, and the deadly hostility of the Indians, in consequence of the kidnapping of Donnaconna and other Indian chiefs in 1536, prevented any permanent settlement. Roberval was recalled by Francis I. to assist in the war against Charles V., and Jacques Cartier, after an unsuccessful attempt to form a settlement at St. Croix, returned ruined in health and fortune to France, where he soon died.

After the death of Francis I., Roberval, accompanied by his brother Achille and a numerous train of enterprising volunteers, embarked for Canada in 1549, but having never been heard of since, are supposed to have perished at sea. The idea of discovering a north-west passage to the Pacific Ocean, still filled the minds of the people of Europe; in 1575 Davis explored the Straits which bear his name, and in 1576, queen Elizabeth, ever bent on taking the lead of every other nation, sent out Martin Frobisher, with three ships, on a voyage of exploration. Frobisher discovered the Straits bearing his name, and finding some *mundic*

or copper pyrites, which he mistook for gold, he returned with a large quantity to England. In the ensuing year Frobisher was despatched by some merchants with three vessels to explore the coast of Labrador and Greenland, with a view to the discovery of a north-west passage. He returned, however, with only 200 tons of the supposed gold ore, and a man, woman, and child, of the Indian race.

In 1578, the expectation of discovering extensive gold regions, induced the merchants of England again to send forth Frobisher, with fifteen vessels. The expedition being attended with as little success as the preceding one, caused the ruin of many adventurers, who received, as before, copper ore, instead of gold.

In 1579, queen Elizabeth, desirous of obtaining some advantage from the discoveries of Cabot, granted to Sir Humphrey Gilbert, half-brother to Sir Walter Raleigh a patent for "the discovering or occupying and peopling such remote, heathen, and barbarous countries as were not actually possessed by any Christian people." Sir Humphrey is described by Haliburton, as "a man of prepossessing manners, commanding esteem and veneration at first sight;" he was celebrated for courage and prudence, genius and learning, eloquence and patriotism, and Elizabeth was so pleased with his conduct that her majesty presented him, as a mark of peculiar favour, an emblematic jewel, consisting of a small gold anchor with a large pearl at the peak, which Sir Humphrey ever after wore at his breast. Many friends from personal attachment agreed to join him, but before the time of departure withdrew from their engagements. Undeterred by disappointments, he sailed with several vessels, one of which foundered at sea and compelled the return to England of the expedition, where misfortune pressed hard upon the gallant adventurer. To assist him in again proceeding to sea, Sir Humphrey granted the lands he was to occupy in America, and then sold his estate in England, by which he was enabled to sail from Plymouth on the 11th June, 1583, with five ships and 250 men. On the 11th July, the fleet arrived off Newfoundland, and on Monday, August 5, proceeded in state to take formal possession of the island, in the presence of the masters and merchants of 36 vessels of different nations, then in the harbour of St. John's. A tent was pitched on shore, the commission of the

queen of England was read in different languages, a turf and twig were then delivered to him, and sir Gilbert declared the island of Newfoundland to belong to his sovereign; and to the dominions of the crown of England it has ever since been attached. Obedience having been promised by the people with loud acclamations, a pillar, with a plate of lead and the arms of the queen engraved thereon, was erected; a tax levied on all ships, and three laws promulgated for the colony: 1st, for the celebration of public worship, according to the Church of England ritual; 2nd, declaring that anything which might be attempted prejudicial to the queen of England was, according to the laws of England, treason; and 3rd, that the uttering of words to the dishonour of her majesty was to be punished with the loss of ears and confiscation of property. On the 20th August, Sir Humphrey sailed from St. John's, with the *Squirrel*, *Delight*, and *Hind*, for Sable Island, to search for swine, and cattle, said to have been landed there thirty years previous. The *Delight* was lost on a sand-bank, and no cattle being procurable, Sir Humphrey determined on proceeding to England, but the *Squirrel*, which he commanded in person, foundered in a storm, and all on board (above 100 persons) perished. Sir John Gilbert, brother to Sir Humphrey, at an advanced age, proceeded with sir John Popham to fit out a fleet for the revival of his brother's claim, and in 1607 they wintered on a small island in the Kenebec river (state of Maine), where distress and cold killed sir John Gilbert, and his followers returned to England.

France made renewed efforts for the acquisition of territory in this part of the North American continent, and in 1598 Henry IV. sent out the marquis de la Roche with a number of convicts, forty of whom he landed on Sable island, and proceeded to explore the adjacent coasts. But unfavourable weather compelled the marquis to return to France, without revisiting Sable island, where the convicts would have perished but for a French ship being wrecked there, which contained provisions for their sustenance, until they could kill seals, and catch fish for their support. Seven years after the king of France sent a vessel to look after his subjects; twelve only were found alive, whose miserable condition induced the king to pardon them on their arrival in France.

In 1600 Henry IV. granted an exclusive trade with Canada, and other privileges to M.

Chauvin, a naval officer, who associated with himself M. Pontgrave, a merchant who had made several profitable trading voyages for furs, to the Saguenay river, and other places in the St. Lawrence. On the death of Chauvin in 1603, Sieur de Monts, a Calvinist, received from Henry IV. a further patent, conferring on him the exclusive trade and government of all the territories between 40° and 54° N. lat., totally regardless of the prior claims of England. De Monts fitted out an armament to carry on the fur trade, under Pontgrave and an enterprising naval officer, named Samuel Champlain, which sailed up the St. Lawrence in 1603, as far as Sault St. Louis. Trading posts were established at different places; Acadia, or Nova Scotia, was visited; and on the 3rd July, 1608, Samuel Champlain founded Quebec as the future capital of New France.

The French unhappily took part in the contests of the Iroquois, or Five Nations, with the Algonquins, who, supplied with fire-arms by Champlain, were enabled to carry on a destructive contest, which tended so rapidly to depopulate the country, that in 1622 Quebec did not contain fifty persons. The first child born of French parents in Quebec, was the son of Abraham Martin and Margaret L'Anglois, who was christened Eustache, on the 24th October, 1621.

To remedy the distressed condition of the colony, which had heretofore been confided to the charge of two or three individuals, Canada was transferred to an association, called the "*Company of One Hundred Partners*," composed of clergy and laity, and headed by the celebrated cardinal Richelieu, whose leading principles were, in the *first* place, the conversion of the heathens to christianity, and in the *second*, the extension of the fur trade and commerce generally, and the discovery of a route to the Pacific Ocean, and to China through the great rivers and lakes of La Nouvelle France.

The king, on the 19th April, 1627, granted Canada to the company, with extensive privileges as a feudal seignory, to be acknowledged by the presentation of a crown of gold, of eight marks weight, on the accession of every sovereign to the throne. With the right of soil, a monopoly of trade was granted; but French subjects were permitted the free exercise of the whale and cod fisheries on the coast, and such colonists as were not servants of the company, might trade with the Indians for peltries (skins) provided they brought all beaver

skins to the factors of the company, who were compelled to purchase them at 40 sous a piece. A Jesuit corps was supported by the company, and "Protestants, and other heretics and Jews," were rigidly excluded from the colony.

The company engaged to send over to La Nouvelle France, in the following year (1628) two or three hundred workmen of all kinds, and before 1643 to augment the number of French inhabitants to 16,000; to lodge, maintain, and find the emigrants in all necessities for three years,—then to make an equal distribution among them of all cleared lands, and to furnish them with seed according to the wants of each family. In every district three priests were to be supplied by the company, with all necessities both for their persons and missions for fifteen years, after which cleared lands were to be assigned for their maintenance. The territorial rights of the company extended over Canada, and part of Florida; the company might erect fortifications, cast cannon, and make all sorts of arms, grant lands, annex titles and rights, but the erection of duchies, marquises, earldoms, and baronies, required royal letters of confirmation. The king granted the company two ships of war, of two or three hundred tons each, to be victualled by the company. The ships were to be paid for, if within the first ten years the company did not convey 1,500 French of both sexes to Canada, and the charter was to be void, if within the last five years an equal number was not conveyed to the colony.

A subsequent ordonnance enlarged the privileges of the company: merchandise manufactured in Canada, was, on importation into France, to pay no duty for fifteen years; natives of the colonies were to be deemed citizens of old France; tradesmen or mechanics, after being employed six years by the company, were, on their return to France, to be privileged to carry on their business in Paris, or elsewhere; ecclesiastics, noblemen, and others, might associate with the company, without derogation of honour, and twelve of the partners of the company were to be created nobles by the king.

These arrangements were frustrated by David Kirtck, a French Calvinist, who sought refuge in England from religious persecution, fitted out an English armament in 1627, and captured eighteen French transports, with 135 pieces of ordnance, destined for Quebec and other places belonging to

the company. Next year Kirtck captured Port Royal, in Acadia (Nova Scotia), visited Tadoussac, destroyed the cattle, and plundered the houses at Cape Tourmente, and proceeded to Gaspé bay, where he met M. de Roquemont, one of the hundred partners, commanding a squadron of vessels freighted with French emigrants, and filled with provisions. Kirtck provoked Roquemont to fight; the French were defeated, and the whole fleet captured. The colonists at Quebec suffered greatly by this disaster, and their distress was increased by the shipwreck, on the coast of Nova Scotia, of a vessel laden with provisions for their relief. Kirtck aided by some other English vessels commanded by his two brothers, proceeded up the St. Lawrence, and on the 29th July, 1629, took possession of Quebec, whose famishing inhabitants were then existing on five ounces of bread a day.

The value of the conquest was at the time but little appreciated, the attention of England being directed to the more southern part of the continent of America; the French opened a negotiation; peace was restored, and by the treaty of St. Germain, in 1632, Charles I. relinquished to Louis XIII. the right which England had always claimed, by reason of the discovery of Cabot, to this portion of America; upon which Canada, Acadia (Nova Scotia), and Isle Royal (Cape Breton), were re-occupied by the French, between whom, and the English in the adjacent states, rivalry and internecine hostilities were frequent, notwithstanding the peaceable relations existing between the home governments.

In 1644 Montreal was ceded to the religious order entitled the St. Sulpicians of Paris; the monopoly of the company of a hundred partners gradually broke down, colonization was extended by a growing attention to agriculture taking the place of the almost exclusive consideration heretofore given to the fur trade, and in 1663 the company having become obnoxious, by reason of their arbitrary proceedings, the king of France abolished the company, and converted Canada into a royal government. M. de Méry was appointed governor, and proceeded from France to Quebec, with 400 regular troops, 100 families as settlers, horses, cattle, and implements of agriculture. The administration of the colony was changed from an ecclesiastical mission to a secular government by the great Colbert, and under the royal jurisdiction, the governor, a king's

commissioner, an apostolical vicar, and four other gentlemen, were formed into a sovereign council, to which was entrusted the jurisdiction of all causes civil and criminal, according to the laws and ordinances of France and the practice of the parliament of Paris, the regulation of commerce, and the expenditure of the public monies. The emigration of French settlers was promoted by every possible means, and a martial spirit was imparted to the population by the location in the colony of the disbanded soldiers of the Carrignan regiment (1000 strong), and of other troops, whose officers became the principal seigneurs on condition of their making cessions under the feudal tenure to the soldiers and other inhabitants.

Louis XIV., aided by the politic Colbert, desirous of establishing Frenchmen in every part of the globe, founded a *West India Company*, with powers and privileges somewhat similar to those granted to the English *East India Company*. The regions recited in the patent of the West India Company, as the fields for operation, were the country from the river Amazon to the Orinoco, the Antilles, Canada, L'Acadia, both continent and islands from the north of Canada to Virginia and Florida; also the coast of Africa, from Cape Verd to the Cape of Good Hope, "so far as the said company may be able to penetrate, whether the said countries may now appertain to France, as being or having been occupied by Frenchmen, or in so far as the said company shall establish itself by exterminating or conquering the natives or colonists of such European nations as are not our allies." Louis XIV. agreed to advance one-fourth of the whole stock without interest for four years, subject to a proportion of all losses which might be incurred during that period. The West India Company was to enjoy a monopoly of the territories and trade, and an exclusive navigation, conceded for forty years, and to receive a bounty of thirty livres on every ton of goods exported from France. The company was authorized to levy war against the Indians or foreign colonies in case of insult; to build forts, raise and maintain troops, grant lands, commute seigneurial dues, and it was bound to carry out a sufficient number of priests and to build churches and houses for their accommodation. All colonists and converts professing the Romish faith were declared to be entitled to the same rights in France and in the colonies as if they had been born and resided within the kingdom.

The arbitrary proceedings of this company soon excited general dissatisfaction in Canada, and on the 8th April 1666, a royal arret of the council of state granted to the Canadians the trade in furs, subject to an allowance of one-fourth of all beaver skins, and one-tenth of all buffalo skins, and the total reservation to the company of the trade of Tadoussac, at the mouth of the Saguenay river.

The colony was kept in continual alarm by the war waged by the Canadians against the Mohawk Indians, who were in alliance with the English colonists at New York. For purposes of military defence, the colonists by a royal edict were directed to concentrate their settlements, and no lands were permitted to be cleared or cultivated but such as were contiguous to each other: this accounts for the peculiar military style of the French Canadian townships. The wars with the Indians were carried on with great barbarism on both sides. In an incursion made by the marquis de Tracey into an Iroquois settlement, the Indians saved themselves by flight; but the old men, women, and children were slaughtered and a *Te Deum* thereon celebrated in the cathedral of Quebec. On another occasion a French army, consisting of 28 companies of regular troops and the whole militia of the colony, marched 700 miles in the midst of winter, from Quebec into the Mohawk territory for the purpose of utterly extirpating the Indians. As usual the Indian warriors escaped, but the sachems (old men), women, and children, were massacred. For every human scalp delivered into the war department a sum of forty livres was paid.

The Canadians, however, not unfrequently experienced the revengeful fury of the Indians. Charlevoix in his history of La Nouvelle France, when describing the atrocities committed by the Indians, says—"Ils ouvrirent le sein des femmes enceintes pour en arracher le fruit qu'elles portoient; ils mirent des enfans tout vivant a la broche et contraignant les mères de les tourner pour les fair rotir." The colonists, frequently taken by surprise, had their houses, cattle, and crops destroyed, and thousands of the French were slain. The French, reinforced from Europe, sent a strong force in February, 1690, who massacred the greater part of the unresisting inhabitants of Shenectady. According to Colden (page 79) the Indians whom the French took prisoners at Shenectady, were cut into pieces, and boiled to

make soup for the Indian allies who accompanied the French!

The contests of the British and French colonists were carried on through their respective Indian allies, and for several years the tide of success was in favour of the French, as the British were by nature not so well adapted for conciliating the natives. The hostilities waged by the Indians were destructive to the scattered colonists: setting little value on life, they fought with desperation, and gave no quarter; protected by the natural fastnesses of their country, they chose their own time for action, and when they had enclosed their enemies in a defile, or surprised them amidst the intricacies of the forest, the war-whoop of the victor, and the death-shriek of the vanquished, were simultaneously heard, and while the bodies of the slain served for food to the savage, the scalped head of the white man was a trophy of glory, and a booty of no inconsiderable value to its possessor.

In 1683, the Mississippi, which had been previously visited by the French missionaries from Montreal (in 1673), and by fur hunters from Quebec, under the guidance of the Indians, was navigated to the sea by M. de la Salle; and all the country watered by that vast river claimed for France under the title of *Louisiana*, in honour of Louis XIV.

The British colonists in Albany became alarmed at the success and increasing strength of the French, not only in Nova Scotia, where hostilities were almost incessant with the English at Massachussetts, but also by their occupation of the two great rivers, the St. Lawrence and the Mississippi, and their successful prosecution of the fur trade and fisheries, then deemed the chief source of wealth in North America. The population of Canada, which in 1674 did not exceed 8,000, including the converted Indians, had rapidly increased; and the intermarriages of Frenchmen with the natives, enabled the government of Quebec to command at all times, a large force of Indian warriors. As an illustration, one instance may be noted: the baron de St. Castine, formerly an officer of the Carrignan regiment, of prepossessing appearance and noble spirit, took up his abode with the Indians, learned their language, adopted their customs, married an Indian wife, and lived with them for twenty years. The Indians made the baron their chief, they looked upon him as a tutelar deity, and during his abode with them, were ready to devote their lives to his

service. The skins and furs collected in hunting were brought to him by the savages in large quantities, and he supplied them in return with European goods. The baron accumulated a large fortune, gave good dowries to his daughters by the Indian wife, whom he married to Frenchmen, and was always ready with a chosen band of warriors to accompany the troops of the governor-general of Canada, against the British and their Indian allies.

The French, feeling more secure in their dominions, pushed forward their outposts with vigour, by means of the fur traders, who established fairs in the different towns, especially at Montreal, to enable the Indians periodically to dispose of their furs. This trade was open to all the colonists, subject to a contribution of one-fourth of the beaver, and one-tenth of the buffalo skins, to the king of France, which right his majesty sold to certain patentees or farmers-general. The trade at the distant posts, whence the Indians could not bring their furs, was licensed and granted as a bounty to old officers, or to the poor gentry of the colony, and these licences were sold for 600 crowns, to inland merchants or traders, who were thus authorised to convey merchandise into the interior of the country for barter; and the purchaser of the licence was bound to employ two canoes, with crews of six men each, who were entitled to provisions and clothing, and who shared legally in the returns of the adventure, after the cost of licence and merchandise, and a profit of 400 per cent. had been reimbursed to the merchant. The extent of trade attached to each licence, was merchandise to the amount of 1,000 crowns, which the seller of the licence had the right of furnishing, at an advance of 15 per cent. on the market price. A successful adventure gave the merchant who bought the licence, 400 per cent. profit on his outlay, and 600 crowns to each of the canoe-men—hence, a spirit of adventure arose; the canoe-men, or voyageurs, looked to the fur trade as a means of obtaining money to clear and stock a farm, though it was too frequently dissipated in riot or debauchery; a bold and hardy race of colonists was trained to danger, accustomed to the forests, familiarised with long and intricate inland navigation, and intimately associated with the Indians, with whom they frequently co-operated in their attacks on the British settlements. In this desultory warfare the Canadian militia were always desirous of ac-

companying the regular French troops, and for many years it was the favourite boast of a Canadian—that he had been employed in an expedition against the English, on the “Belle Riviere,” or on the “Ohio.”

The injurious effect of these proceedings was so great, that the British colonists at Albany were preparing to abandon their territory, when the New England colonies agreed to form a coalition for their mutual defence. A mission was despatched to London, explaining the views of the New Englanders, and soliciting aid towards the naval and military expedition, which was organising for the destruction of the French settlements in Canada and Nova Scotia.

The attack was to combine two expeditions—one to proceed by land and inland navigation against the southern frontier of the French; the other, consisting of a frigate mounting 40 guns, another ship of 16, and a third of 8 guns, with transports for the conveyance of 800 to 1000 men, in all about 34 vessels—against the French seaboard: the expedition cost the colonists £150,000. The naval force was confided to the charge of Sir William Phipps, a man of considerable ability, who had raised himself by persevering energy to a high station. Mr. Haliburton says that he was the son of a blacksmith at Pemaquid in New England; born in 1650, and apprenticed to a carpenter to learn shipbuilding. On the expiration of his indentures he built a vessel, which he navigated himself; and hearing of the wreck of a Spanish ship near the Bahamas, containing bullion, made an unsuccessful attempt to raise it. In 1683 Captain Phipps was sent by the English government in search of another Spanish wreck, in which he was also unsuccessful. Five years after, the Duke of Albemarle, then Governor of Jamaica, provided him with the necessary apparatus, and sent him to renew his search for this valuable wreck, which was reported to contain much wealth. After many fruitless endeavours Phipps was about retiring to Jamaica, when a sea-feather growing out of a rock, attracted the attention of some sailors who were crossing the reef in a small boat. A diver was sent to fetch it up, who, on descending, found several guns at the foot of the rock, and on a second descent obtained a quantity of silver. Finally, Phipps raised from the wreck thirty-two tons of silver bullion, and a large quantity of gold, pearls, and jewels, which had been lying in the sea for more than half a cen-

ture. Phipps was knighted by James II., made sheriff of New England, and on his solicitation entrusted with the command of a colonial expedition against the French in Nova Scotia, in which he was unfortunate; and he subsequently obtained the command of the fleet fitted out by the New Englanders against the French in Canada, whose proceedings we are now detailing. On the 20th of May, 1690 (according to Haliburton), Sir William Phipps and his squadron appeared before Port Royal in Nova Scotia. Manival, the French Governor, having only 80 men and very insufficient defences, surrendered, as did also the Governor of Chedabucto, and the commanders of other posts in Acadia and Newfoundland. Phipps likewise captured several posts on the Saint Lawrence, and was within a few days' sail of Quebec before the alarm spread thither. Frontenac, the Governor, hastened from Montreal with reinforcements, and strengthened the defences, which consisted of little beyond rude intrenchments of timber and mounds of earth. On the morning of the 16th of October, 1691, Sir William reached the shores of Quebec, and summoned it to surrender: the summons was unhesitatingly rejected, yet the English, who had previously evinced so much activity, now appear to have been strangely remiss, for no hostile measure was taken until the 18th, when Phipps landed 1,500 men on the banks of the river St. Charles. The French, with only 300 irregulars, kept up a brisk firing, which caused much loss to the British, though at night they retreated into the town, leaving them masters of the field. The larger vessels anchored off Quebec, and directed a cannonade against the upper part of the city, which they renewed the following day, but with little effect. Meantime the ships had sustained considerable damage, and about noon the squadron moved up the river beyond Cape Diamond. The troops previously continued to advance, and Phipps sent on shore six pieces of ordnance, and pushed forward his men in hopes of capturing the place by means of land batteries. But the French militia harassed them severely, and maintained so steady and destructive a fire from behind some palisades that the English commander, considering further advance hopeless, re-embarked his troops on the 22nd, leaving behind their cannon and ammunition. Phipps has been much blamed for not attacking the body of the place, which, ac-

cording to Colden, he might easily have captured. Owing to some misunderstanding, or want of concert, the attack which was to have been made on Montreal simultaneously with that on Quebec, did not take place; but in the following year (1691) the Iroquois, aided by some English and native allies, advanced towards Montreal. The military command there was then held by De Callière, an able officer who was very popular with his Indian neighbours, having even joined them in their war dances, and spared no pains to ingratiate himself with them; in which he appears to have been so successful, that when mustering his troops for defence, 800 Indians assembled to aid him at the Prairie de la Magdeleine. The Iroquois, nevertheless, succeeded in capturing several of the advanced posts and a considerable number of prisoners; but were eventually obliged to retreat, though they long afterwards continued to make sudden inroads upon the colony in every direction, headed by a favourite chief named the *Black Cauldron*; but their incursions were greatly checked by Frontenac's judicious distribution of military posts. The treaty of Ryswick in 1697, by which peace was concluded between Britain and France, produced a temporary cessation of hostilities in Canada; but with the renewal of war between the mother countries in 1702, they recommenced, and the English, elated by the successes of Marlborough and Eugene, and alarmed by the rapidly increasing number of the French colonists, then amounting to 15,000, conceived the bold design of embracing within their territory the whole of North America. The wars in which Louis XIV. was engaged compelled him to leave the Canadian government very much to its own resources. De Callière, who had succeeded Frontenac, died in 1703, and the Count de Vaudreuil was appointed governor in his stead. He was a man of great ability, but his policy, like that of his predecessors, was to extend, in every possible manner, the French dominion; to cut the English off from the fur trade, and gradually to hem them in between the highlands of Nova Scotia and the Alleghany Mountains. The English now called upon their allies of the "Five Nations" to renew hostilities against their old enemies; but these tribes were exceedingly unwilling to move, and alleged, that when they concluded a treaty, they did so with an intention to keep it; while the Europeans seemed to enter into such engage-

ments solely with the view of immediately breaking them. One chief intimated his suspicion that both nations were drunk. They did little, therefore, of themselves, or by their own impulse; and when called upon to join in an expedition, came slowly and reluctantly forward. At this period the aborigines were numerous and powerful. Tribes of Abenagua, Algonquin, Iroquois, Mississauga, and Huron Indians, occupied the country from below Quebec to Lake Huron.

In 1709 a plan for the conquest of Canada was approved by the parliament of queen Anne, and authority and resources deemed sufficient for its accomplishment, were sent to New York. De Vaudreuil, who had some time before made an incursion on the English frontier, and destroyed a village named Hewreuil, or Haverhill, was on the watch, and soon learned that 2,000 English had issued from New York, and were to be joined by an equal number of savages: he assembled his troops, and would have carried the war into the enemy's country, but his allies objected, and he then turned all his attention to strengthening his own frontier. The British formed a chain of posts from New York, occupied in great force lakes George and Champlain, erected forts to protect their descent upon Canada, and made every preparation for attacking Montreal; but a large body of the forces whose assistance they expected, being required for the war on the continent of Europe, and the Iroquois having, in a general council, come to the determination that the prolongation of strife between the two European nations was the best security for the maintenance of their independence, which would in all probability be lost if either became dominant, suddenly deserted them; the English, in consequence of this double disappointment, weakened also by a pestilential fever which had broken out among them, and was said to have been caused by the Indians poisoning the water of which they drank, were compelled to abandon the enterprise; and after destroying their forts they returned to New York. The interval of peace between the rival colonies was, however, of very brief duration, and the French were employed during the greater part of it in barbarous and exterminating warfare with an extensive tribe, called the Outagamis, or Foxes, whom they did not succeed in wholly destroying, and whose incursions, though carried on by a mere remnant, rendered their communication with their settlements on the Mississippi

insecure. The British government resolved to give the New Englanders stronger support, in their endeavours to expel the French from Canada and Nova Scotia; in 1710 an armament was fitted out for a combined attack on Canada by sea and land, and on the 18th September, a fleet, consisting of the *Dragon*, *Leostaff*, *Feversham*, and *Chester* men-of-war, the *Star-bomb* and *Massachusetts*, provincial galleys, with fourteen transports in the pay of Massachusetts, five of Connecticut, two of New Hampshire, three of Rhode Island, a tender, and five English transports, with one regiment of marines from England, and four regiments of provincials raised in New England, but commissioned by the queen, and armed at the royal expense, sailed from Boston bay for Port Royal, in Nova Scotia, where it arrived on the 24th September, 1710. The particulars of the siege, and capitulation of the French governor, Subercase, belong to the history of Nova Scotia. The English lost 15 men, besides 26 who were wrecked in a transport at the entrance of the harbour; 200 marines and 250 volunteers were left to garrison Port Royal, and on the 26th October the expedition returned to Boston. Meanwhile, the Count De Vaudreuil was busily engaged strengthening the fortifications, constructing barracks, and training militia, amounting to 5,000 in a population of 25,000. Much apprehension was felt by the Canadians notwithstanding the strength of Quebec, which was deemed so impregnable that a proposed attempt for its capture was one of the articles of impeachment against Harley, the English minister. The plans of the British were frustrated by an unforeseen disaster, arising partly from tempestuous weather, and partly from their ignorance of the coast; in one day (22nd August) 8 transports containing 884 officers, soldiers and sailors, were wrecked at the Seven Islands, near the mouth of the St. Lawrence, and the remaining vessels returned to Boston. General Nicholson, had already taken the field, at the head of the land forces, but on learning the loss of the fleet, he fell back on New York. The English colonists, again defeated, still persevered, and were making fresh preparations for renewing hostilities, when the change of ministry in England, and the treaty of Utrecht on the 13th March, 1713, relieved Canada for a time from further apprehension, for by this treaty England resigned her claim to Canada, and France hers to Acadia and Newfoundland, and

made over to England her assumed rights to the sovereignty of the Five Nations, which she having never been able to enforce, and England being in that respect equally powerless, was a merely nominal concession.

This treaty was the commencement of a new epoch for Canada, and the unusual period of tranquillity which followed it, caused a great increase in her agriculture and commerce. In 1720, Quebec had a population of about 7,000, and Montreal of 3,000. Nineteen vessels cleared from Quebec, laden with peltries, lumber, tar, tobacco, flour, pork, &c., and four men-of-war were built in the colony. From Charlevoix's description of the city, which he visited in 1720-21, part of the upper and lower towns must have been built, but the adjacent shores and islands were still covered with forests. The society generally, he describes, as gay and sociable, consisting chiefly of military men, and the lower order of noblesse, all poor, and likely to continue so, being much better adapted for practising the most agreeable ways of spending money, than the more laborious methods of making it. They saw their English neighbours steadily employed in accumulating wealth, but consoled themselves with the reflection that they did not know how to enjoy it. Their favourite employment was the fur trade, the only one indeed at all adapted to their excitable natures and desultory habits, but the little fortunes they occasionally made thereby, were compared by Charlevoix to the hillocks of sand in the deserts of Africa, which rise and disappear almost at the same moment. Below Quebec, the banks of the St. Lawrence were laid out in tolerably cultivated seigniories. Trois Rivières then contained only 800 inhabitants; the city of Montreal was rapidly extending, and was in a great degree protected from the incursions of hostile Indians by the barriers formed by the villages of Sault St. Louis, and Montgomery, which were inhabited by friendly tribes. Above Montreal there were only detached stations for defence and barter with the Indians. Fort Cataraqui, or Frontenac, on Lake Ontario, appears to have stood in the midst of an uncultivated country, without any settlements in its vicinity. At Niagara, Charlevoix speaks of a cottage dignified with the name of a fort, and guarded by a few French officers and soldiers.

In 1725 the Marquis De Vaudreuil died, after having ably administered the affairs of Canada during 22 years. He had shewn

his judgment in the attention paid by him to the agricultural and commercial interests of Canada, an unusual feature in the policy of a French governor, their general aim being to extend the dominion, and strengthen the power of France by conquest and military rule; while the English, on the contrary, strove rather to establish themselves by the arts of peace.

In the following year (1726) he was succeeded by the Marquis de Beauharnois (a natural son of Louis XIV.) whose ambitious administration excited yet more the alarm and jealousy of the English colonists of New York and New England, while the intrigues of the Jesuits with the Indians contributed not a little to bring about the final struggle for dominion on the American continent, between the two most powerful nations of Europe. De Beauharnois continued in office for twenty years, and was followed by a succession of governors, whose tenure of office was too brief, and comparatively uneventful, to render their administration worth detailing.

The war between Great Britain and France in 1745, led to the reduction in that year of Cape Breton, by a British naval and military force, combined with the provincial troops of the New England colonies; but the successful battle of Fontenoy roused the martial spirit of the Canadians to attempt the re-conquest of Nova Scotia, in 1746 and 1747, in which they failed, and the treaty of Aix-La-Chapelle in 1748 for a time suspended hostilities. Commissioners were then appointed to settle a boundary line between the British and French territories in North America.

The object of the French was to confine the English within the boundary of the Alleghany mountains, and thus prevent their approach to the Lakes, the St. Lawrence, the Mississippi, (where the former had now established themselves) and their tributary streams. The local Government, without any authority from home, and with a display of military pomp, calculated to impress on the minds of the Indians the idea that France would assert her right to the territory thus marked, proceeded to survey the projected line of demarcation between the possessions of France and those which the Canadian governor was pleased, in his *liberality*, to assign to England; leaden plates, bearing the royal arms of France, were sunk at stated distances, and the whole ceremony was concluded with much formality. Such an important step, it may be

imagined, seriously alarmed the Indians, as well as the English, and ultimately led to their active co-operation for the utter expulsion of the French from North America.

In pursuance of the line of policy marked out by the French counsels at home and in Canada, the Jesuits intrigued with the Acadians or descendants of the early French inhabitants, with the view of prevailing on them to quit Nova Scotia, and migrate to a military post recently established beyond its frontier, on the Canadian side, where a new colony was to be formed, in aid of which the royal sanction was granted for an appropriation of 800,000 livres. Cornwallis, the governor of Nova Scotia, soon convinced the French that he was aware of their proceedings; he erected a fort opposite the French frontier, near the bay of Fundy, on the river Beaubassin, which he placed under the command of major Laurence, and seized at the mouth of the St. John river, a vessel laden with supplies for the French. While these measures were in progress, the French commenced enforcing their power along the line of demarcation they had marked out; three individuals who had licences to trade from their respective English governors with the Indians, on the Ohio, were seized by the French, and carried prisoners to Montreal, whence, after severe treatment and strict examination, they were at length liberated, with injunctions not to repeat their trespass on the French territories.

The intrigues of the Jesuits with the Iroquois to detach them from the English, were so far successful that the Indians permitted the French to erect the fort La Presentation, near their border; and, but for the extraordinary influence exercised by William Johnston, the wily character of the Canadians might have gone far to frustrate the confederacy forming between the English and Indians for the expulsion of the French. The arrival of the Marquis du Quesne de Menneville, in 1752,* as governor of Canada, Louisiana, Cape Breton, St. John's, and their dependencies, and the openly aggressive spirit he displayed, gave indications that hostilities might soon be expected in Eu-

rope; detachments of regulars, militia, and Indians were despatched by the marquis to the Ohio; fort Du Quesne (actually within the Virginia territory) and other posts were erected, in the hope of keeping the English within the Apalachian or Alleghany mountains; and from Ticonderago, Crown Point, and Fort Niagara, the most ferocious attacks were made on the peaceable English settlers,† notwithstanding the treaty of Aix-la-Chapelle in 1748. The British, though still acting on the defensive, were not idle; a fort was built in the vicinity of Du Quesne fort, quaintly termed *Necessity*, and a garrison was despatched from Virginia, under the command of George Washington, whose name has since become so illustrious, and who then held a lieutenant-colonel's commission. Washington, on his march to assume the command of Fort *Necessity*, was met by a reconnoitring party from Du Quesne fort, under M. de Jumonville, who peremptorily forbade the English to proceed further. The mandate was answered by a volley of musketry, which killed Jumonville and several of his men. The French commandant at Du Quesne, Monsieur Contre-cœur, besieged Fort *Necessity*, and obliged Washington to capitulate. England at that time was openly preparing for war with France, which the ambition of Frederick of Prussia and the state of Europe soon rendered general. A strong fleet, with troops and warlike munition, was despatched to reinforce Quebec; an English fleet pursued it, and succeeded in capturing two frigates, with the engineers and troops on board, on the banks of Newfoundland.

The Marquis du Quesne having resigned, he was succeeded in July, 1755, by the last French governor in Canada, the Marquis de Vaudreuil de Cavagnal, whose administration commenced by the defeat of the brave but rash general Braddock, on the 9th of July, 1755, in one of the defiles of the Alleghany Mountains. Braddock, accustomed to European, rather than to Indian warfare, neglected the accustomed precaution of scouts and advance posts; and refused to make the needful preparations

* In this year a 74 gun-ship was built by the French government in Canada, but owing to some mismanagement she was *hogged* in launching near Cape Diamond. Two cargoes of Canadian wheat were shipped at the same period for Marseilles; the arrival of which was naturally hailed with great satisfaction in France.

† It was at this period that the remarkable convention of the British colonists (then vulnerable owing

to their separate local governments) was held at Albany in July, 1754, when Benjamin Franklin drew up a plan for uniting the States, establishing a quota, and levying men and money throughout the different Colonies to resist the French, which, though not then acted on, became subsequently the basis of the federal union formed for the overthrow of the British dominion in America.

against the French and their Indian allies, who, when the devoted British had entered a gorge, where retreat was almost impossible, poured from their ambuscades a deadly fire, under which the soldiers of the unfortunate Braddock fell rapidly, without even the satisfaction of seeing or meeting their foes. The death of their leader was the signal that further advance was hopeless; and Colonel Washington, the second in command, succeeded by a strenuous and skilful effort in rescuing the remainder of the British army, who were afterwards joined by 6,000 provincial troops, under general Johnston and governor Shirley. Johnston, with the intention of investing Crown Point, joined general Lyman near Lake George, where they were attacked by 3,000 French, under the command of Baron Dieskau. After a contest of four hours' duration, the French retreated to Crown Point, with a loss of 1,000 men and the capture of their leader, who was severely wounded. General Johnston also received several wounds, his conduct was highly commended, and the honour of knighthood was conferred upon him. This success revived the drooping spirits of the British army, and helped to train the provincials, who were brigaded along with the regular troops, for the contest they were soon to wage with the very men by whose side they now fought. The campaign of 1755 closed in October with the retirement of the British to Albany, after reinforcing the garrison of Oswego, but without any attack on Crown Point. France, fully aware of the importance of Canada, sent out early in the ensuing year a large body of chosen troops under the command of major-general the Marquis de Montcalm, who, after continued successes during the campaigns of 1756 and 1757, captured Forts Oswego and William Henry. Their triumph was, however, stained by the brutal massacre of nearly 2,000 English prisoners by their Indian allies, sanctioned, it was asserted, by the French, though the chivalrous character of De Montcalm renders it highly improbable that he could have been concerned in it. The feelings excited throughout England and North America by the tidings of this monstrous deed may be conceived, and the deep abhorrence felt towards those who, if they did not actually permit it, at least appeared to have taken no active measures for its prevention, tended materially to accelerate the downfall of French dominion in Canada. The elder

Pitt (afterwards earl of Chatham), then recently called to the head of affairs, proved himself a great statesman, and by his extraordinary powers of eloquence infused an energetic spirit into His Majesty's counsels, and so wielded the resources of the nation, that a rapid change came over the aspect of American affairs. Preparations were made on a great scale for the assistance of the New Englanders, and the campaign was opened upon a plan of combined operations by sea and land somewhat resembling that adopted in 1690. Three divisions, under generals of acknowledged talent, were to invade Canada at different points, of which the chief was that destined to attack Quebec, which being the capital of the French dominions, situated in the midst of a hostile country, rendered almost impregnable by its position and fortifications, and defended by 20,000 regulars and militia, besides numerous Indian allies, was considered the most arduous undertaking of the whole war. The officer selected by Mr. Pitt for the command of this detachment was General Wolfe, who though only thirty-three years of age, possessed a military reputation of long standing, having distinguished himself at the battle of Lafelt when only twenty. At the siege of Louisburg, in the preceding year, he had established his character as an officer of extraordinary ability, for though not first in command, being present only as brigadier-general, his exertions mainly contributed to the obtaining of this important position. The naval forces destined for the attack comprised twenty sail of the line, two ships of fifty guns, twelve frigates, and fourteen smaller vessels, under the command of admiral Saunders; and by this fleet the soldiers of Wolfe, amounting to 8,000 veteran troops, were safely conveyed to the Isle of Orleans.

The Marquis de Montcalm made vigorous preparations for the defence of Quebec; his armed force consisted of about 13,000 men, of whom six battalions were regulars, and the remainder well disciplined Canadian troops, with some cavalry and Indians; his army was ranged from the river St. Lawrence to the Falls of Montmorenci, ready to oppose the landing of the British. He possessed also a few vessels of war and some fire ships, with which an attempt was made to destroy the English fleet, but they were caught by grappling irons, and towed safely past. The strength of De Montcalm's defences was proved by the unsuccessful at-

tempt made by Brigadier-general Monckton, who occupied Point Levi, opposite Quebec, to bombard the capital; and, again, by the failure of the attack of the 31st of July, headed by Wolfe, on the entrenchments at Montmorenci, in which the assailants were repulsed with a loss of 182 killed and 650 wounded, including 11 officers killed and 46 wounded. The boats, it is said, in which the British landed, were accidentally delayed—the grenadiers rushed forward too eagerly,—and the French, strongly posted, and aided by many Indian riflemen, poured on them a destructive fire, which compelled their retreat. Wolfe keenly felt this disappointment, and expressed in his despatches home, his doubt of being able to reduce Quebec during that campaign, as the fleet, his strongest arm, was ineffective against the rocky wall on which the citadel stood, and the positions of the French were, moreover, guarded by troops more numerous than his own. As soon as he had partially recovered from a violent fever, caused by grief and anxiety acting on a feeble frame, he called a council of war, in which it was agreed to act on the bold suggestion proposed by General Townshend, of attempting to gain the heights of Abraham, which commanded the weakest point of the city. Wolfe accordingly commenced operations, and conducted them with an address, secrecy, and presence of mind, rarely equalled. He deceived the French by still appearing to direct his whole attention to the Montmorenci entrenchments, and at nightfall on the 12th of September, 1759, the troops, consisting of the 15th, 22nd, 28th, 35th, 40th, 43rd, 45th, 47th, 48th, 58th, 60th (2nd and 3rd battalions), and 78th regiments, with a corps of rangers, embarked in two divisions; the boats dropped silently down the river, and the troops landed in safety at the place now called Wolfe's Cove. Here a new difficulty presented itself—the ascent was so precipitous that Wolfe is said to have doubted its being practicable; but the soldiers led by Frazer's Highlanders, and aided by the branches of shrubs and roots of trees growing among the rocks, succeeded in reaching the summit, where they were speedily drawn up in regular order. De Montcalm, maddened by finding his vigilance had failed in guarding this important pass, lost his usual prudence, and seeing that his opponent had gained so much by hazarding all, he, with an infatuation for which only strongly excited feeling can account, resolved upon

meeting the British in battle array on the plains of Abraham, without even waiting the return of 2,000 men dispatched by him as a corps of observation under De Bougainville, to Cape Rouge, nine miles above Quebec. The French sallied forth from their almost impregnable fortress without field artillery, and with a heat and precipitation which, under the circumstances, strangely contrasted with the coolness and precision of the British. The eagle eye of Wolfe took in at a glance all the details of his position. He knew that for him retreat was next to impossible; yet while directing his main attention to the steady advance of his right division, he skilfully covered his flanks, and endeavoured to preserve their communication with the shore. Both armies may be said to have been without artillery, the French having only two guns, and the English a light cannon, which the soldiers had dragged up the heights with ropes; the sabre and the bayonet accordingly decided the day, and never was the nervous strength of the British arm more manifestly displayed. The agile Scotch Highlanders powerfully wielded their stout claymores, and filled the place of cavalry, while the steady fire of the English fusileers compensated, in some degree, the absence of artillery. On the part of the French 1,500 light infantry, and some Indian riflemen, advanced first, and began a desultory fire; but the British reserved their shot for the main body, and opened no general fire in return until their opponents were within forty yards. They then discharged a deadly volley, which Wolfe followed up by charging with the bayonet, at the head of the grenadiers of the 22nd, 40th, and 50th regiments, who had acquired the honourable title of Louisburgh grenadiers. Although wounded by a ball in the wrist, and another in the groin, and suffering from fever and dysentery, he still pressed on against the French, who fought with fury heightened by the fanaticism excited in them by the priests against the English heretics. The heroism of De Montcalm was as conspicuous as that of his illustrious opponent; both headed their men—both rushed with eagerness wherever the battle raged most fiercely, and often by their personal prowess and example changed the fortune of the moment—both acutely sensible of the responsibility of their respective positions, and stimulated by the enthusiasm which only those who have mixed in the heady current of battle can conceive—

though repeatedly wounded still pressed on at the head of their men, till almost, at the same moment, both of these gallant commanders received their death wound. A ball entered the breast of Wolfe, who, faint with the loss of blood, reeled, and leant against the shoulder of one of his officers, whispering, "*Support me! let not my brave soldiers see me drop.*" He was carried to some distance in the rear; his eyes were waxing dim, and the life-blood ebbing fast from his strong and generous heart, when the cry of "*THEY RUN! THEY RUN!*" rent the air, and seemed to stay for a moment his fleeting spirit. "*Who run?*" he eagerly inquired. "*The French,*" was the reply. Then, said the general, "*Pray, do one of you run to colonel Barton, and tell him to march Webb's regiment with all speed down to Charles river, to cut off the retreat of the fugitives. Now, God be praised! I shall die happy.*" The patriotic soldier then closed his eyes, and expired. The gallant Montcalm also perished, rejoicing in his last moments that he should not live to witness the surrender of Quebec; and both the conquerors and the conquered joined in deploring the loss of their brave and beloved commanders. General Townshend thus wrote home respecting the British hero:—"I am not ashamed to own to you, that my heart does not exult in the midst of this success. I have lost but a friend in general Wolfe; our country a sure support and a perpetual honour. If the world were sensible at how dear a price we have purchased Quebec in his death, it would damp the public joy. Our best consolation is, that Providence seemed not to promise that he should remain long among us. He was himself sensible of the weakness of his constitution, and determined to crowd into a few years actions that would have adorned length of life." The contest had scarcely ended when De Bougainville appeared in the rear; but he perceived that the fortune of the day was decided, and retreated without attempting to retrieve it. On the 18th Quebec capitulated. The French lost about 1,500 men killed and wounded. The loss of the British was as follows:—1 general, 1 captain, 6 lieutenants, 1 ensign, 3 serjeants, and 45 rank and file killed; and 1 brigadier-general, 4 staff officers, 12 captains, 26 lieutenants, 10 engineers, 25 serjeants, 4 drummers, and 506 rank and file wounded. The expeditions by land were also successful. General Amherst marched from New York with

a large force, and reduced Ticonderago and Crown Point; while General Prideaux, aided by Sir William Johnston, with a body of Indian troops, took Niagara—and thus ended the campaign. In the spring of 1760 general De Levi having assembled an army of regulars and militia amounting to 12,000 men, advanced to the heights of Abraham, and prepared to besiege Quebec, which had been left under the command of general Murray with a garrison of about 5,000 men, but whose numbers had been greatly reduced by sickness. Relying on the bravery of his troops, and fearing, perhaps, that his fortifications were not sufficient to withstand the enemy, general Murray quitted his fortress with about 3,000 men to give De Levi battle; but overpowered by numbers he was compelled to return to Quebec, with the loss of 1,000 men and all his field artillery. The French, it is said, lost 2,500. De Levi then besieged the town, but Murray held out bravely until the arrival of a small squadron under admiral Swanton on the 15th of May, compelled the precipitate retreat of De Levi. The French army then concentrated itself in Montreal; but being enclosed by the three divisions, viz., that under General Amherst, and those from Quebec and Niagara, the French could no longer maintain their ground, and the Marquis de Vaudreuil on the 8th of September, 1760, was compelled to sign a capitulation surrendering to the British the whole of Canada. The population of Canada then amounted to about 69,000, including 7,400 converted Indians, and were described by general Murray as a frugal, industrious, and moral race, with a noblesse also very poor, but much respected. The land chiefly cultivated was a comparatively narrow strip on the banks of the St. Lawrence. No people ever had juster cause of gratitude for a change of government than the Canadians in the present instance. The colonists were suffering severely from rapacity and misgovernment. Bigot, the French Intendant, or king's financier, and his creatures, plundered the colonists in all possible ways; a paper currency, termed card-money, based on the responsibility of the king of France, for the general support of the civil and military establishments of the colony, and which, from having been faithfully redeemed during a period of thirty years, enjoyed unlimited credit, enabled Bigot to conceal for a long time his waste and peculations; and while the British were capturing Canada by force of arms, the French monarch was

destroying the commerce and prospects of his subjects by dishonouring the bills of exchange of the Intendant to whom he had granted absolute power; thus involving in ruin those who possessed any bills or paper currency, which at the conquest amounted to nearly £4,000,000 sterling, the only compensation received for which was four per cent. on the original value.

Civil and religious liberty was granted to the Canadians; and in the words of the writer of the Political Annals of Canada, "previous history affords no example of such forbearance and generosity on the part of the conquerors towards the conquered—forming such a new era in civilised warfare that an admiring world admitted the claim of Great Britain to the glory of conquering a people, less from views of ambition and the security of her other colonies, than from the hope of improving their situation, and endowing them with the privileges of freemen."

At first the English civil law was introduced, and all offices were conferred on British subjects, then consisting of military officers and about 500 petty traders, who treated with contempt even the French noblesse, many of whom were fine specimens of the French gentlemen of the "old school." General Murray, the first English governor of the province, strongly protested against the home policy, which was at length altered, and in 1774 the "Quebec Bill" was passed, which restored to the French, in civil matters, the ancient system called the *Coutume de Paris*, established a legislative council for the regulation of all matters except taxation, and substituted a modified oath of allegiance for the previous oaths of abjuration and supremacy.

A new cause of disturbance again involved the Canadian colonists in the horrors of war, for they were ere long called upon to defend their territory from the very men who had assisted them in acquiring it from the French. The refusal of the New Englanders to contribute their share of taxes levied by the British government, mainly for the purpose of defraying the expenses incurred in the capture of Canada, unless permitted to send representatives to the British parliament, with other reasons which it is not within the scope of this work to detail, led to their declaration of independence, and the formation of the United States republic, which was no sooner established than the New Englanders, henceforth to be termed the

Americans, attempted the conquest of Canada. Towards the close of the summer of 1775, the American forces, amounting to 4,000 men, invaded Canada by Lake Champlain, and from the sources of the Kennebec river. The main division, under brigadier-general Montgomery, was eminently successful; Montreal, Chambly, St. John's, Longueuil, and other posts then of importance were captured, and all the military stores and provisions at Montreal and on the rivers fell into their hands. The smaller division of the American army under colonel Arnold, consisting of 1100 men, sailed up the Kennebec, and after traversing with great difficulty the forests and swamps of Maine, where their sufferings from hunger were so intolerable as to induce them to eat the flesh of dogs, and the leather of their cartouche boxes, arrived at Satagan on the 4th of November, and on the 8th reached Point Levi, opposite Quebec, whose inhabitants were perfectly ignorant of their approach. Quebec was at this moment almost defenceless, and had Arnold been able to cross the river, in all probability it must have been captured; but, fortunately, the shipping had been removed to the other side, and the news of its danger reached the city while there was yet time to prepare for its defence. General Carleton, the British governor, was meanwhile occupied in endeavouring to repulse general Montgomery, who, having made himself master of Montreal, turned his attention to effect a junction of his own division with that of Arnold.

The British general, by a masterly manœuvre, passed quietly down the river, and reached the citadel on the 19th of November without interruption, Arnold's troops having previously crossed the St. Lawrence a short distance above Quebec, taken possession of the environs, and encamped at Pointe aux Trembles, 21 miles from Quebec, awaiting Montgomery, who on his arrival assumed the command of both divisions. Carleton was welcomed in Quebec with great joy; the French Canadians vied with the oldest British soldiers in zeal and energy; and the little garrison of 1,800 men, of whom only 350 were regulars (including 230 of Frazer's Highlanders, who had settled in the country and were re-embodied under colonel M'Lean), 450 seamen, and the remainder a gallant band of Canadian militia and armed artificers, awaited with calm confidence the attack of the combined forces. Montgomery summoned the citadel to surrender and re-

ceived an immediate refusal, upon which a blockade was commenced, which lasted throughout the whole month of December, when the Americans held a council of war, and decided upon a night assault. The besiegers divided into two storming parties, and, headed by Montgomery and Arnold, advanced, during the raging of a furious snow-storm, from opposite points, intending to unite near Prescott gate, and after forcing it proceed to the upper town. As they approached the gate the assailants led by Montgomery became crowded in the long narrow pass leading to the gate of the fortress, and a confused noise, mingling with the conflict of the elements, struck the watchful ear of the outer sentinel, who, receiving no answer to his challenge, roused the guard. Montgomery, with great quickness, formed his men for the assault, but the Canadian militia, aided by nine British seamen to work the guns, opened a tremendous fire from the battery which commanded the path, and compelled their retreat. The besieged, nevertheless, unable to ascertain the real state of affairs, continued their cannonade until every sound in answer to their fire had died away. The morning dawned without at first revealing any traces of the enemy, for the falling snow had thrown, as it were, a mantle over the dead bodies of the brave Montgomery and the gallant soldiers who had fallen by his side. His death was rendered the more striking by the circumstance of his having, sixteen years before, served under Wolfe on the heights of Abraham, but on his marriage with the daughter of Judge Livingston he joined the cause of the colonists, and perished in attempting to deprive the British of the fortress he had previously aided them in acquiring.

Arnold had also been unsuccessful. In a desperate assault on the first barrier on the opposite side he had been severely wounded, and taken off the field; but captain Morgan led on his division, carried the first barrier, and pushed on to the second, but being hemmed in by a detachment of British and Canadians in the rear, captain Morgan with his men, to the number of 426, surrendered without reaching Prescott gate, where the governor had taken his stand. The death of their commander greatly dispirited the Americans, and though Arnold endeavoured to maintain his position little was done until April, 1776, when a reinforcement of 2000 men arrived under general Wooster, who made some ineffectual attacks; but the dis-

embarkation, early in May, of supplies from England obliged the Americans to retreat to Montreal, and enabled Carleton entirely to expel them from Canada.

At the time of the invasion there were not more than 900 regular troops in the British colony, and the greater part of these surrendered in Forts Chambly and St. John, or were taken while retiring from Montreal. Such, however, were the feelings of the Canadians, on account of the honourable treatment experienced from the English government, after the conquest of the colony from the French, that they cheerfully exerted themselves to preserve Canada to England, thus affording another illustration of the wisdom of humane and generous policy. It was only on the 7th September, that the Canadian officers of militia received their commissions; but their activity and zeal made amends for the tardiness with which confidence had been reposed in them, and of 1,500 defenders of Quebec, 800 were militia men. When the Americans evacuated the province, they had about 8,000 men, but the Canadian militia and regulars presented to them an organised force of 13,000, and thus compelled their retreat across the frontier.

On the termination of the American war, in 1783, many royalists sought refuge in Upper or Western Canada, where lands were freely granted them in the Western districts, adjoining the great lakes. In 1790-91, Mr. Pitt, to gratify the strongly expressed desire for representative government in Canada, and for the adoption of English institutions, divided the province into two districts; the *Western* being called Upper, and the *Eastern* Lower Canada. The representative assemblies were elected by 40s. freeholders, which was nearly equivalent to universal suffrage, but the proposed counterpoise by the creation of an hereditary noblesse, including the most respectable of the French seigneurs, was prevented by the opposition of Mr. Fox, whose recommendation of a council chosen by the crown for life, was adopted. The first House of Assembly in Lower Canada, consisting of 50 members, was held in 1792. The object of Mr. Pitt in dividing the province was evidently to conciliate the feelings, and even prejudices, of the French Canadians, who, in 1778, in a memorial to the crown, thus expressed their sentiments:—"It is our religion, our laws relative to our property, and our personal surety in which we are most interested;

and these we enjoy in the most ample manner by the Quebec bill. We are the more averse to a House of Assembly, from the fatal consequences which will result from it. Can we, as Roman Catholics, hope to preserve for any length of time the same prerogatives as Protestant subjects in a House of Representatives? and will there not come a time when the influence of the latter will overbalance that of our posterity? In this case should we and our posterity enjoy the same advantages which our present constitution secures to us? Again: have we not reason to dread lest we should soon see those taxes levied upon the estates which are at present actually levied upon articles of commerce, which the inhabitant pays indirectly it is true, but in proportion to what he consumes? Shall we not fear that we may one day see the seeds of dissension created by the Assembly of Representatives, and nourished by those intestine hatreds which the opposite interests of the old and new subjects will naturally give birth to?"

The Legislative Council of Lower Canada for some time governed the colony, and the Representative Assembly was merely the register of its acts; and previous to 1807 complaints were made, that the members of the Council made large grants of land to themselves; the Assembly demanded that the judges being dependent on and removable by the government should not sit in the Assembly, and to gain this concession they offered to defray from the funds of the colony, the whole expense of its civil administration. This was refused by the governor and representatives of the crown with indignation, the Assembly was dissolved, and a French newspaper, termed the "Canadian," which had censured the proceedings of the government, and of the Legislative Council, was suppressed, by the imprisonment of the printer, and the destruction of his types and presses. Six individuals were also taken into custody, but never brought to trial, and the period was not inappropriately called the "reign of terror." In 1811 a new Assembly was convened; it persisted in the same demands, when fortunately for all parties, general Sir James Craig, who had been governor-general from the 24th October, 1807, was on the 14th September, 1811, replaced by Sir George Prevost, who at once expressed a desire to redress existing grievances, and his sympathy with the men who were struggling for freedom, and who in 1803, had,

through the chief-justice of Montreal, declared that slavery was inconsistent with the laws of the country, and that all slaves in Canada should receive their liberty.

In 1812, the Americans, thinking the period propitious for capturing Canada, by reason of the discontent which existed, especially in Lower Canada, at the conduct of Sir James Craig, resolved to declare war against England, and invade Canada, where it was supposed the mass of the people would be disposed to receive the Americans with open arms. - Dr. Eustis, secretary-at-war, said in Congress—"We can take the Canadas without soldiers; we have only to send officers into the provinces, and the people disaffected towards their own government will rally round our standard;" and Mr. Clay stated—"It is absurd to suppose that we shall not succeed in our enterprise against the enemy's provinces. We have the Canadas as much at our command as Great Britain has the ocean. *We must take the continent from them: I wish never to see peace till we do.*"

The proceedings of the United States government of that day were totally unjustifiable. The Marquis Wellesley, then Secretary of State for Foreign Affairs, received intelligence from different parts of America during the year 1811, that the Americans were preparing to invade Canada. On the 24th June, 1812, it was known at Quebec that war was declared between England and America; and the Canadians rose with a noble spirit, in defence of England and of their country. They might have availed themselves of the disturbed state of Great Britain—they might have joined, on their own terms, the United States, and formed a portion of the Congress—but their efforts were those of a generous nature, which, forgetting the injuries, remembered only the benefits, received from England. Four battalions of militia were instantly raised,—the Canadian Voltigeurs (a fine corps especially suited to the country) were organized and equipped in the short space of six weeks, by the liberality of the younger part of the Canadian gentry, from among whom they were gallantly officered; thus a spirit of military enthusiasm was infused into the whole population, and an example held up to the settlers in Upper Canada, highly important at a crisis, when the regular troops of England were drained from the colonies for the purpose of combating Napoleon.

Sir George Prevost, the new governor, summoned the Canadian parliament, ap-

pealed to its honourable spirit, to the attachment of the people to the religion of their forefathers, and their ardent love for the true interests of their country. The Canadians responded to the appeal, and were expressly thanked by his royal highness the Prince Regent for their support and attachment—his royal highness declaring, that “relying with confidence on the courage and loyalty of his majesty’s Canadian subjects, he was equally fearless of the result of any attack upon them, or of any insidious attempt to alienate their affections from the mother country.”

On the breaking out of the war, Upper Canada was partly peopled by emigrants from the United States, who might be supposed unwilling to shed the blood of their kindred; the people of Lower Canada had but recently been represented by authority as seditious, or so liable to be turned from their allegiance as to endanger the government. There were only about 4,000 British troops in both provinces, scattered along a frontier of 1,300 miles; and the St. Lawrence, an immense military highway, open to the United States, and leading into the heart of Canada, was undefended, thus endangering the safety of the British forces stationed on its borders. With the view of keeping up the price of bills of exchange, of which the military government was the chief vendor, the specie of the country had been suffered to be carried into the United States, which materially added to existing difficulties. To remedy this and prepare for defence, the legislature was assembled; and government paper, bearing interest, and payable in bills of exchange on England, was substituted for specie.

The arrival of two battalions, for the purpose of relieving two others under orders for their departure, added to the regular force. At the instance of the government, a law had passed during the preceding winter, for drafting the militia for actual service, and four weak battalions had been assembled before the war. Every description of force was prepared for service; the citadel of Quebec was garrisoned by the inhabitants of the town, proud of the duty and of the confidence of the government. In a month after the declaration of war, the lower province seemed capable of becoming the assailant. The Americans had collected, in the summer of 1811, their principal regular force on their north-western frontier ostensibly against the Indians, whom they attacked. This force,

commanded by general Hull, one of the few remaining officers of the war of Independence, was joined by militia and volunteers, who had set out on their march for Upper Canada, before the declaration of war. The invaders made roads through immense forests, depending on them for their communications and supplies, and arrived at Detroit, on the fifth July, 1812, about 2,500 strong. On the 12th July, the enemy passed over into Upper Canada, took possession of Sandwich, and issued a proclamation to the apparently defenceless inhabitants, inviting them to join the American standard, or at least to remain inactive, assuring them, in either case, of the protection of the United States. After some trifling skirmishes with the handful of British troops stationed at Fort Maldon, which, under the command of lieutenant-colonel St. George protected Amherstburg, and upon hearing of the consequences of the surrender of Michilimackinack, which drew upon the Americans the hostility of nearly all the Indians, general Hull became alarmed for his own safety, and returned to Detroit, where he shut himself up on the 7th of August. Sir George Prevost had entrusted the government and command of Upper Canada to general Brock, an able and active soldier, who strenuously supported the spirit of the loyal inhabitants. On the 5th August, Brock prorogued the parliament at York; on the 12th he was at Amherstburg; he crossed the frontier and was advancing to the attack of the fort of Detroit, when a white flag was held out, and general Hull and his whole army, who, it must be owned, were greatly reduced by sickness, surrendered to a force of 330 regulars, 400 militia, and 600 Indians. People were utterly amazed when they saw so considerable a part of the American forces marched captive into Montreal and Quebec. Two months after the surrender of Hull, the enemy had collected another force of 6000 men on the Niagara frontier. On the 13th October, this force crossed over into Upper Canada, at Queenston, and overpowered the small detachment stationed there. General Brock, who was at Fort George, put himself at the head of a small party, hastened to the spot in advance of his army, and fell while valiantly, but ineffectually, resisting overpowering numbers. The enemy obtained possession of the heights, but was soon dislodged by the British troops on their arrival, and 700 men surrendered at discretion to general Sheaffe, on whom the

command had devolved. A temporary truce ensued, which was interrupted by an attempt at invasion, on the 20th and 28th November, near Fort Erie, by the American general Smyth, with 4,500 men, which was repulsed by lieutenant-colonel Bisshopp, with 600 regulars and militia. An equally unsuccessful attempt was made about the same time, by the British naval force on Lake Ontario, against Sacket's harbour. The rest of the winter passed away without any event of importance, except the capture, on the 22nd January, by colonel Proctor, after a smart action, of 49 prisoners, amongst whom was the American general Winchester, on the Detroit frontier; and an assault on Ogdensburg, which appears to have been intended as a prelude to an attack on Sacket's Harbour. From the time of the surrender of Hull, the Americans, however much they blamed that officer, seem to have been fully aware of the chief cause of his disaster; they, therefore, strained every nerve to obtain control of the lakes, and the ice no sooner disappeared on Lake Ontario, than they came out with a superior naval force from Sacket's Harbour, which, for a time, secured to them the possession of the lake.

On the 27th April, 1813, general Dearborn landed with 2000 Americans, who, after a brave resistance on the part of general Sheaffe, and about 600 men, gained possession of York (Toronto) the capital of Upper Canada, where they destroyed the public buildings, carried off the artillery and naval stores, and wreaked their vengeance on a printing press, and the frame of a ship building for the British service on the lake. The enemy then proceeded to Niagara to besiege Fort George, where they landed troops, and then returned to Sacket's Harbour, from whence additional forces were conveyed to the same quarter, which succeeded in landing to the number of 4000 men, in spite of the determined resistance of brigadier-general Vincent; who with only 1000 regulars and 300 militia, and a fort rendered indefensible by the severe fire it had sustained from an American battery on the opposite side, still contested the ground, but was finally compelled to retreat to Burlington Bay, near the western extremity of Lake Ontario, leaving the whole Niagara frontier, containing a very large proportion of the population of Upper Canada, in the power of the enemy. During the taking of Fort George, an abortive attempt

was made by general Sir G. Prevost on the Americans at Sacket's Harbour, which, unhappily, led to a misunderstanding between him and the naval service, productive of much evil to the British interest in the Canadas during the remainder of the war. Their success encouraged the enemy, and extraordinary exertions were made at this period by the United States. Two corps were despatched under generals Winchester and Harrison, by different lines, for the seizure of Detroit and the adjoining districts; Winchester, with about 1000 men, arrived first, and colonel Proctor seizing the opportunity, hastily collected his forces, amounting to about 500 whites, and 450 Indians, gave the enemy battle on the 22nd January, 1813, and succeeded in gaining a complete victory, capturing the general and 467 American soldiers, and killing and wounding as many more; general Winchester fell into the hands of a Wyandot Indian, who stripped off his uniform, adorned his own person with it, and was with difficulty induced to make restitution.

Colonel Proctor reinforced his troops, and proceeded to the falls of Miami, where general Harrison had taken up his position, and having learned the defeat of his associate, was awaiting succours from the main body of the American army. In spite of many delays, which enabled Harrison to strengthen his position, colonel Proctor succeeded in greatly weakening the enemy's force, and removing all immediate danger of invasion. Meanwhile Dearborn resolved upon driving the British from Burlington Heights, and cutting off the communication between generals Vincent and Proctor, and on the 5th of June, 4000 men under generals Chandler and Winder, took up their position at Stoney Creek, and with full confidence in the superiority of their numbers, prepared to attack general Vincent on the following day. Lieutenant-colonel Harvey, after reconnoitring the enemy's position, proposed attacking it that night, and having obtained permission to do so, succeeded in surprising the American camp, with 704 bayonets; and after killing and wounding a great number of the enemy he retired, carrying with him both Chandler and Winder, and 120 men as prisoners. This affair so thoroughly disconcerted the enemy, that they retreated to Forty Mile Creek, eleven miles distant, and on being threatened by Sir James Yeo, who was advancing with a squadron and a few troops to the support of general Vincent,

they retired to Fort George. From thence lieutenant-colonel Boerstler was sent with 700 men to seize an advanced post of the English at Beaver-dam, but being attacked first by a body of Indians, and afterwards by a few British troops, he surrendered himself and his corps prisoners of war. The campaign continued some time without any event of much moment, excepting the capture, on 3rd June, 1813, of two American vessels, carrying 22 guns, which were taken by the British at Isle aux Noix, after a well contested action of three hours, and some other smaller advantages gained by the British.

On the 11th July a successful attack was made by the British on Black Rock, headed by colonel Bisshopp, who was mortally wounded while re-embarking; and on the 30th of that month colonel Murray destroyed the American barracks at Plattsburg. But at this time the triumphs of the English were changed into reverses. On the 10th of September commodore Perry, with a squadron of 9 vessels mounting 56 guns, captured the British naval force on Lake Erie. Colonel Proctor could therefore no longer obtain supplies, his only means of communication with the British army being by land, several hundred miles through forests.

His situation nearly resembled that of Hull, at Detroit; he had one advantage, however, which Hull had not—the friendship of the Indians, but he strangely delayed his retreat a fortnight after the loss of his fleet, and till the near approach of a superior force of the enemy. On the 5th of October he was only three days' march (56 miles) from Detroit, pursuing his retreat along the Trenché. His force consisted of less than 1,000 British and militia, and about 1,200 Indians, the greater number of whom gradually deserted him, whilst the Americans were upwards of 3,000 strong. He chose his position carefully, hoping thereby to neutralize the effect of superior numbers, but a sudden charge of mounted Kentucky riflemen broke the British line, the whole was thrown into confusion, and a large number of the British were made prisoners. The Indians who still remained with Proctor fought bravely, headed by their chief Tecumtheh, who had perseveringly endeavoured to unite all the tribes in a confederacy against the Americans. He is described as singularly brave and generous, and gifted with extraordinary powers of eloquence. He per-

ished in the conflict with many of his faithful followers. The Americans returned to Detroit with their prisoners, and Proctor, with a few stragglers and a number of Indians, retired to Ancaster, and after rallying about 200 men joined the army at Niagara. The American forces gradually collected at the lower ends of Lakes Ontario and Champlain under generals Wilkinson and Hampton, with the intention of making a combined attack on Montreal, while the chief part of the British regular force was in Upper Canada. Major-general Hampton was to advance with 6,000 men from Lake Champlain, and major-general Wilkinson, with 8,000 men, from Grenadier Island, near Sacket's harbour. It was evident that if this attack succeeded, and the command of that city and the surrounding country should be retained by the Americans, Upper Canada was conquered, and every British soldier in it a prisoner, unless he could succeed in fighting his way to Quebec. There was nothing to prevent Wilkinson, with competent pilots for the rapids, from landing on the Island of Montreal with an army completely equipped in three or four days after his leaving Lake Ontario, and Hampton was only a couple of days' march from the St. Lawrence. Some misunderstanding, however, with respect to time appears to have arisen between them. On the 21st of October Hampton entered the province apparently with the intention of penetrating the St. Lawrence, by the river Chateauguay. On the 26th he came upon colonel de Salaberry's position on that river, about 80 miles from the frontier. This officer, a native of Canada, belonging to one of its old and most distinguished families, had served with the British army in various parts of the world. To great activity and personal intrepidity he united military science and experience, and possessed the entire confidence of his little force, which formed the advance of the army, and consisted of about 800 men, chiefly natives of Lower Canada, and composed of fencibles, voltigeurs, militia, and Indians. The enemy, formed principally of new levies, seemed to think that the battle was to be won by field manœuvres, and platoon-firing. Colonel de Salaberry took advantage of all the protection for his men that the choice of position in a thickly wooded country afforded, and poured in a deadly fire, every man making sure of his object; the colonel setting the example. The enemy's loss was considerable, but has never been correctly

ascertained; that of colonel de Salaberry's force was, two killed and sixteen wounded. Hampton, believing himself to be opposed by a large force, retired to the frontier, and thence to Plattsburg, where he remained in a state of inactivity, his army dwindling away by sickness and desertion. General Wilkinson, with his division, which consisted of between 8,000 and 9,000 men, completely equipped and provided, left Grenadier Island on the 5th November in boats and other crafts, and having crossed Lake Ontario entered the St. Lawrence. At Williamsburg he landed a considerable number of troops to clear the banks, and also to lighten the boats while descending the rapids. These delays gave time to detachments from the garrisons of Kingston and Prescott to overtake him, and on the 11th of November a large body of these, under major-general Boyd, encountered colonel Morrison, who headed a much smaller force sent from Kingston and Prescott. The English, after a long contest, were victorious; the Americans retired to their boats, but continued to descend towards Montreal. Near Cornwall, their commander, major-general Wilkinson, received despatches from general Hampton, stating his determination of retreating to Lake Champlain; and finding, moreover, the hostility felt towards the Americans by the population generally, he gave up the idea of attacking Montreal during that campaign, and took up winter quarters near French Mills, on the Salmon river, but from scarcity of provisions was ultimately induced to proceed to Plattsburg, on Lake Champlain. Hostilities were recommenced early in the spring of 1814. Lieutenant-colonel Williams having taken post with 1,500 British on the river Colle, Wilkinson, who had upwards of 4,000 men at Plattsburg, made an unsuccessful attack upon them; and on the 6th of May Sir Gordon Drummond gained another advantage, carrying, though with some loss, the fort of Oswego, with which he captured a considerable quantity of ammunition and stores. The failure of the enemy's attempts on Lower or East Canada, and the course of events in Europe, began to give a new character to the war, and the offensive measures on the side of the United States became almost confined to a part of the Upper Province. Although the British naval force on Lake Ontario had ventured out of port during the preceding campaign, the advantages for naval warfare were entirely on the side of the Americans, who ran up their ships

in a few weeks, and had all their supplies on the spot, whilst the English vessels were built as slowly and regularly as if intended for the ocean, and a great part of the materials were obliged to be sent from England. The chief portion of the American army were assembled on the American frontier under the command of major-general Brown, an officer who had greatly distinguished himself during the war, having been previously known in Lower Canada as a plain farmer and dealer in lumber and potash, and who had commanded Sacket's Harbour when attacked by Sir George Prevost. On the 3rd of July, at the head of between 3,000 and 4,000 men, he crossed into Upper Canada by Black Rock, and obtained possession of Fort Erie by capitulation. He then marched towards Chippawa, where he was met by the advanced guard of major-general Riall, and obliged to retreat to Fort George, and thence in the direction of Burlington heights. The enemy then proceeded to invest Fort George, plundered the inhabitants of the frontier, and destroyed the thriving village of St. David's, but being disappointed of assistance from Sacket's Harbour he fell back upon Chippawa. General Riall, having received reinforcements, advanced, and on the afternoon of the 25th the two armies again met near the Falls, and waged a long and bloody contest with various success until nearly midnight. General Riall had ordered a retreat, when, in the midst of the confusion, lieutenant-general Drummond arrived with fresh troops; and after a new struggle the Americans retired to Fort Erie. The American force engaged in this action, known as the battle of Lundy's Lane, was about 4,000, that of the British, as stated by Drummond, 2,800. The total loss of the former was 854, that of the latter 878. The British army then proceeded to invest Fort Erie, and on the 14th of August Drummond made an unsuccessful attempt to take it by surprise, and lost several of his best officers and bravest men. His total loss was 905, that of the enemy only 84. After this unfortunate affair Drummond converted the siege into a blockade.

The cessation of the European war had enabled England to turn her arms more powerfully against the Americans. While the events just related were taking place important operations were proceeding in other parts of Canada. On the 26th of June, transports arrived at Quebec from Bordeaux with the 6th and 82nd regiments.

They were ordered to the Niagara frontier, where they arrived late in August, having had to march round Lake Ontario. The principal part of the remainder of the troops which arrived from France, were assembled on the Richelieu River, and brigaded with the forces already in that quarter, under General de Rottenburg, for the purpose of carrying into effect instructions from England for offensive operations against the United States. Great exertions had for some time previous been making on both sides, to ensure a superiority on Lake Champlain. On the 3rd of September, the British army, amounting to 11,000 men, under Sir George Prevost, passed the frontier by Odell Town, and reached Plattsburg on the 6th, with trifling opposition, where the American general Macomb occupied a fortified position with 1,500 regulars, and as many of the inhabitants as could be collected from both sides of the Lake. From the 6th to the 11th, cannon were brought up from the rear, and batteries erected by the British.

On the 11th, the British flotilla from Isle aux Noix came up and attacked the American naval force in the bay; the land batteries opened at the same time, and the troops moved to the assault. When they had reached the heights on which the American works were situated, victory declared itself in favour of the American naval force. Sir George Prevost countermanded the orders for the attack; the next morning the whole army retreated, and on the 13th re-entered the province, with a total loss of 235 men, exclusive of deserters, whose number on this, as on every occasion when the British soldiers entered the enemy's country, was considerable.

On the 17th of September, the American forces made a sortie from Fort Erie, which was repulsed, but with severe loss. On the 21st, General Drummond broke up the siege, and retired upon Chippawa, Fort George, and Burlington Heights. On the 17th of October, Sir James Yeo appeared on the Lake, and brought reinforcements and supplies to general Drummond; the American squadron under Chauncey remained in Sacket's Harbour. On the 5th of November, Drummond again advanced upon Fort Erie, and then succeeded in obliging the Americans to evacuate the place. Michilimackinack, which the American superiority on Lake Erie and Lake Huron, enabled them to attack, had been gallantly and successfully

defended. The enemy burnt the establishment of the North West Company at Sault St. Marie, but colonel M'Donnell managed to send parties of voyageurs and Indians to the head of the Mississippi, and captured the post of Prairie du Chien. British naval officers and seamen, sent overland from York, had also captured in open boats two American armed schooners on Lake Huron, and preparations were making to secure the command of that lake, and even to recover that of Lake Erie, with which the former communicates by Detroit. The war, meantime, in America had brought about important changes. The British obtained possession of Washington, where they destroyed public edifices and private property, as the Americans had done in Canada. At New Orleans the English were defeated. Both parties began to sigh for peace, and on the 24th of December, 1814, a treaty between the United States and Great Britain was signed at Ghent, which, at length, restored tranquillity to Canada; on the 18th of February, 1815, it was ratified and proclaimed at Washington, and on the 9th of March made known at Quebec by Sir George Prevost.

In April, 1815, Sir G. G. Drummond was appointed to succeed Sir George Prevost; and soon after the Canadian parliament resumed the question of the independence of the judges, and impeached the chief judges of Quebec and Montreal. On the 12th of July, 1816, Sir John Coape Sherbrooke was appointed governor-general; he adopted a conciliatory policy, and in 1818 was instructed by Lord Bathurst, his majesty's Secretary of State for the Colonies, to accept the offer previously made by the colonists, of paying the whole civil list out of the colonial revenues. The governor-general, however, merely asked for a sum to meet current expenses, which was granted: new taxes were imposed, of which the Assembly resolved to supervise the future appropriation. Sir John Sherbrooke laid before the Assembly, at their urgent solicitation, a detailed estimate of the civil expenditure, divided under distinct heads. Unfortunately the state of Sir John's health compelled his return to England, and on the 13th of July, 1818, the Duke of Richmond was appointed governor-general. His Grace refused to place detailed estimates before the House of Assembly, and required the House to vote the supplies under branch heads without detail. In this policy he was supported by the Legislative Council, and

the duke by its advice drew upon the receiver-general of the provincial revenues for the sum he required. In September, 1819, the Duke of Richmond died of hydrophobia; on the 18th of June, 1820, the Earl of Dalhousie, who possessed high reputation as a soldier, was of very amiable character, and had been much liked as governor of Nova Scotia, was appointed governor-general of Canada. The noble earl, acting under the advice of his Legislative Council, on being refused by the Assembly £22,000 as a permanent grant, which he required for the public service, unless in detailed items, as an annual bill of supply, drew upon the receiver-general for even a larger sum; and in this he was supported by Earl Bathurst, who, however, recommended economy for the future, and directed two estimates to be prepared—one, including the expenses of civil government, to be defrayed from funds of which the crown claimed the entire disposal; the other and much smaller estimate to embrace divers public objects, over which the House of Assembly was to exercise complete control. This partial concession to the reasonable demands of the representatives of the people was well received, and the money voted accordingly. The French Canadians were grateful for the liberties which they gradually acquired from the British government; and in their constitutional struggles they were aided by the reformers in the House of Assembly in Upper Canada, who had also to contend against what was termed the "family compact" party. Lord Durham thus described the power this party possessed, and the influence it exercised on the government, legislature, and general affairs of the province:—"For a long time this body of men, receiving at times accessions to its numbers, possessed of almost all the highest public offices, by means of which, and of its influence in the Executive Council, it wielded all the powers of government; it maintained influence in the legislature by means of its predominance in the Legislative Council; and it disposed of the large number of petty posts which are in the patronage of the Government all over the province. Successive governors, as they came in their turn, are said to have either submitted quietly to its influence, or, after a short and unavailing struggle, to have yielded to this well-organized party the real conduct of affairs. The bench, the magistracy, the high offices of the Episcopal church, and a great part of the legal pro-

fession, are filled by the adherents of this party: by grant or purchase, they have acquired nearly the whole of the waste lands of the province; they are all-powerful in the chartered banks, and, till lately, shared among themselves almost exclusively all offices of trust and profit. The bulk of this party consists, for the most part, of native-born inhabitants of the colony, or of emigrants who settled in it before the last war with the United States; the principal members of it belong to the church of England, and the maintenance of the claims of that church has always been one of its distinguishing characteristics.

"A monopoly of power so extensive and so lasting could not fail, in process of time, to excite envy, create dissatisfaction, and ultimately provoke attack; and an opposition consequently grew up in the Assembly which assailed the ruling party, by appealing to popular principles of government, by denouncing the alleged jobbing and profusion of the official body, and by instituting inquiries into abuses, for the purpose of promoting reform, and especially economy. The official party not being removed when it failed to command a majority in the Assembly, still continued to wield all the powers of the executive government, to strengthen itself by its patronage, and to influence the policy of the colonial governor and of the colonial department at home. By its secure majority in the Legislative Council, it could effectually control the legislative powers of the Assembly. It could choose its moment for dissolving hostile Assemblies; and could always ensure, for those that were favourable to itself, the tenure of their seats for the full term of the four years allowed by law."

It is, however, due to this party to state, that they did much for the welfare of Canada; and many of the social improvements, which mark the gradual progress of Canada, had their origin in the endeavours of the "family compact," who were, generally speaking, not related to each other, but attached by certain principles, such as those of the old Tory party in England. Of their loyalty there has never been a doubt; but it may be questioned whether their prolonged opposition to the carrying out of principles which the majority of those most interested earnestly and perseveringly desired, has not caused many of the evils which have since befallen Canada.

M. Papineau, at his election for the west

ward of the city of Montreal, in July, 1820, thus indicated the advantages which the Canadians had derived from British rule:—

"Not many days," said M. Papineau, "have elapsed since we assembled on this spot for the same purpose as that which now calls us together—the choice of representatives; the opportunity of that choice being caused by a great national calamity—the decease of that beloved Sovereign who had reigned over the inhabitants of this country since the day they became British subjects: it is impossible not to express the feeling of gratitude for the many benefits received from him, and those of sorrow for his loss, so deeply felt in this, as in every other portion of his extensive dominions. And how could it be otherwise, when each year of his long reign has been marked by new favours bestowed upon the country? To enumerate these, and to detail the history of this country for so many years, would occupy more time than can be spared by those whom I have the honour to address. Suffice it then at a glance to compare our present happy situation with that of our fathers on the eve of the day when George the Third became their legitimate monarch. Suffice it to recollect, that under the French government, (internally and externally arbitrary and oppressive,) the interests of this country had been more constantly neglected and mal-administered than any other part of its dependencies. In its estimation, Canada seems not to have been considered as a country which, from fertility of soil, salubrity of climate, and extent of territory, might have been the peaceful abode of a numerous and happy population, but as a military post, whose feeble garrison was condemned to live in a state of perpetual warfare and insecurity, frequently suffering from famine, without trade, or a trade monopolised by privileged companies, public and private property often pillaged, and personal liberty daily violated; when year after year the handful of inhabitants settled in this province were dragged from their homes and families, to shed their blood, and carry murder and havoc from the shores of the great lakes, the Mississippi and the Ohio, to those of Nova Scotia, Newfoundland, and Hudson's Bay. Such was the situation of our fathers: behold the change! George the Third, a sovereign revered for his moral character, attention to his kingly duties, and love of his subjects, succeeds to Louis XV., a prince then deservedly despised for his debauchery, his inattention to the wants of his people, and his lavish profusion of the public monies upon favourites and mistresses. From that day the reign of the law succeeded to that of violence. From that day the treasures, the navy, and the armies of Great Britain, are mustered to afford us an invincible protection against external danger. From that day the better part of her laws became ours; while our religion, property, and the laws by which they were governed, remain unaltered. Soon after are granted to us the privileges of its free constitution; an infallible pledge, when acted upon, of our internal prosperity. Now religious toleration; trial by jury (that wisest of safeguards ever devised for the protection of innocence); security against arbitrary imprisonment, by the privileges attached to the writ of *Habeas Corpus*; legal and equal security afforded to all, in their person, honour, and property; the right to obey no other laws than those of our own making and choice, expressed through our representatives:—all these advantages have become our birthright, and shall, I

hope, be the lasting inheritance of our posterity. To secure them let us only act as British subjects and freemen."—*Life of Lord Sydenham.*

The struggle on the part of the representatives of the people for complete control over the local revenues, and a not unnatural desire on the part of the Canadians, that some of their representatives who possessed their confidence, should be placed in office, or in the Legislative Assembly, grew more urgent, when Sir John Caldwell, the receiver-general in 1823, "became an insolvent, and was found to be indebted to the public to the amount of £100,000." In 1824 the majority of the Assembly denied the right of the crown to appropriate any part of the revenues of the province without their consent; required a reduction of the public expenditure; and that publicity should be given to the revenue receipts and disbursements, which they had vainly claimed during Sir John Caldwell's receivership. Lord Dalhousie expressed strong displeasure at these proceedings; but during his temporary absence Sir Francis Burton, his *locum tenens*, yielded a great point to the Assembly, by sanctioning a supply bill, in which no distinction was made between the civil government and "popular" expenditure, the whole being considered an annual grant under the control of the Assembly. The custom duties collected on imports under an Act of the British parliament in 1774, now amounted to about £34,000 a year; and a smaller amount was raised from the sale of lands and timber, which it was alleged had been much "jobbed" by some of the members of the Legislative Council. The Assembly claimed the entire disposal of these sums, declaring, that as they were contributed by the people, the representatives of the people ought alone to be entrusted with their appropriation. To this Lord Dalhousie objected, and he was supported by Earl Bathurst, who censured the concession made by Sir Francis Burton. On the accession of Lord Goderich (now Earl of Ripon) to the station of Secretary of State for the Colonies in 1827, he directed a proposition to be made to the Assembly, offering the surrender of the disputed revenues, on condition of their granting a civil list in perpetuity of £30,000 per annum. The House of Assembly met to consider this proposition, and elected M. Papineau as its speaker, an appointment which the governor-general refused to confirm, on account of the opposition that

gentleman had previously manifested to the measures of Government. The Assembly persisted in their right to elect their own speaker, and Lord Dalhousie refused to call any session for the winter of 1827-28. As might naturally be expected discontent rose to a great height, and a petition was sent from Canada to the king, signed by 87,000 inhabitants, complaining of the conduct of successive governors, and urging the justice of compliance with the requirements of the Assembly. Mr. Huskisson, then Colonial Minister, moved that the petition should be referred to a select committee of the House of Commons, which was accordingly done—the committee strongly condemned the practice of appropriating large sums of the money levied from the Canadian people, without the concurrence of their Parliament—recommended, that the whole revenue of the colony should be placed at the disposal of the Assembly—that the governor, judges, and Executive Council should be independent of the annual votes of the Assembly—that persons having the confidence of the people, should be liberally viewed by the crown in its appointments to the Legislative and Executive Councils—and stated generally, that the complaints of the colonists were well-founded, and deserved redress. The report of the committee of the Imperial Parliament gave great satisfaction in the colony, and the Assembly ordered four hundred copies to be printed and distributed among their constituents.

Sir James Kempt was sent out in September, 1828, in the place of Lord Dalhousie; he treated the colonists with frankness and liberality, added new members to the Executive Council, and requested the judges to retire from the Legislative Council, which they refused to do, though they promised to take no part in its deliberations. In 1829 the Assembly cut off several thousand pounds from the estimates laid before them by the governor, and Sir George Murray, then Colonial Secretary, did not disallow the act. Sir James Kempt, to the great regret of the colonists, quitted Canada in 1830. He was succeeded by Lord Aylmer. The Act of Parliament which was necessary to sanction the proposed transfer of authority over the public purse was unfortunately delayed by the death of George IV. and other circumstances. Lord Goderich, who was again at the head of the Colonial Office, on the 24th December, 1830, announced through

the governor-general, his intention of bringing a bill into Parliament to secure to the Assembly the disposal of the colonial revenues, and requiring in return a fixed civil list of £19,100. His lordship, however, intimated that the timber, territorial, and other casual revenues, which had amounted to £11,231, were to remain at the disposal of the crown, and to be employed chiefly in the maintenance of the Established Church. The Assembly thereupon passed a resolution that, "under no circumstances, and upon no consideration whatever would they abandon or compromise their claim over the whole public revenue."

On the 8th March, 1831, the House presented a long list of grievances to the governor-general, which his lordship transmitted home, admitting that many of them were well-founded. The Imperial Parliament then passed an act giving the Colonial Assembly full power over the colonial revenues, but leaving the question of the civil list still unsettled. On the 20th January, 1832, the Assembly decreed that the judges should be independent of the crown, and should have permanent salaries assigned them, but that only the chief justice should hold a seat in the Executive Council. By a large majority, on the motion of Mr. Neilson, it was resolved that the salaries should be drawn in the first instance from the casual and territorial revenues. When the bill came home Lord Goderich, desirous of preserving to the crown the disposal of the casual and territorial revenues, refused the royal assent, which greatly exasperated matters in the colony; the Assembly declined to do more than pass *annual* supply-bills for the governor and other branches of the executive, and confidently referred to the decision of the committee of the House of Commons, by which his majesty's ministers had promised to be guided. The popular party then commenced a direct attack on the Legislative Council—attached the names of individuals to the salaries voted, and appended the condition that several offices were not to be held by one individual—a not unreasonable demand, since there were instances of several distinct appointments being held by the same person. This measure was rejected in England. So far the Assembly had justice on their side; but, irritated by the opposition their wishes met with at home, they proceeded to demand the *abolition* of the Legislative Council, and the substitution of a Council elected from the body of

the people; the franchise to be £20 in the towns and £10 in the country; a stated income to be a necessary qualification for the Legislative Councillors, and their functions to last for six years. This proposition somewhat resembled that suggested by Mr. Fox in 1790.

Lord Stanley, then Secretary of State for the Colonies, announced, that he deemed such a measure inconsistent with monarchical institutions, and therefore could never advise his majesty to consent thereto. He also censured the Legislative Council for its intemperate language, and intimated "the possibility that events might unhappily force upon Parliament the exercise of its supreme authority, to compose the internal dissension of the colonies, which might lead to a modification of the charter of the Canadas." This was considered a threat by the Assembly, and in 1834 they resented it by refusing to pass any supply bill, and M. Dennis Viger was deputed to proceed to London, to lay before his majesty's government a detailed statement of the grievances of the colonists.

Mr. Spring Rice, now Lord Monteagle, having succeeded Lord Stanley as Colonial Minister, intimated his intention of renouncing the disputed revenues, according to the recommendation of the parliamentary committee; but asked for time to consider the whole subject. M. Papineau, and other leaders, therefore, deferred any strong measures, but complained that the administration was carried on as usual, and that £31,000 had been advanced from the military chest for the payment of the civil servants, whereby their responsibility to the Assembly was evaded. Lord Stanley justified this act on the ground that the civil servants would otherwise have been left without any salary, through no fault of their own, pending the decision of the crown. Lord Monteagle afterwards declared, that on the very day when, through the change of ministry, he quitted the Colonial Office, he had a measure to submit to the cabinet, involving the surrender of the revenue point at issue.

Sir Robert Peel on his accession to office in 1835, determined on sending a special commission to Canada, for the examination of existing grievances, and the adjustment of differences, and he offered to yield the casual and territorial revenues, on condition of a civil list being fixed for at least seven years. Before this arrangement was matured, Sir Robert Peel's administration

was succeeded by that of lord Melbourne, who, adhering in some measure to the same plan, sent out the Earl of Gosford, Sir Charles Edward Grey, and Sir George Gipps, as commissioners, Lord Gosford to be governor in the room of Lord Aylmer. Lord Glenelg, then colonial secretary, expressed his readiness to surrender the disposal of the entire revenue to the Assembly, on the settlement of an independent provision for the judges, and the salaries of the civil officers being fixed for ten years. The whole proceeds of the sale of unclaimed lands were to be placed at the disposal of the Assembly, but government could not consent to part with the management of them, abolish the Land Company, or agree to the formation of an Elective Legislative Council. The non-interference of the metropolitan power in the internal affairs of the colonies, was fully conceded in lord Glenelg's instructions to earl Gosford, in July, 1835; and in a despatch written in the same year to Sir F. Head, as lieutenant-governor of Upper Canada, his lordship thus forcibly expresses himself: "*Parliamentary legislation on any subject of exclusively internal concern, in any British colony, possessing a Representative Assembly, is, as a general rule, unconstitutional. It is a right of which the exercise is reserved for extreme cases, in which necessity at once creates and justifies the exception.*" Respecting the Elective Council, Lord Glenelg stated to Earl Gosford and to Sir F. Head, "the king is most unwilling to admit as open to debate the question, whether one of the vital principles of the Provincial Government shall undergo alteration;" but his majesty would not absolutely close the avenue of the inquiry, even though "for the present he saw no reasonable ground of doubt."

Lord Glenelg by not more decidedly expressing his opinion on this important point, left great latitude to Lord Gosford, who though a good and amiable man, was quite unfit for the difficult and responsible position in which he was placed. He is stated to have coquetted with the leaders of the Assembly; invited them to his table; declared that "to be acceptable to the great body of the people, was one of the most essential elements of fitness for public station;" intimated his readiness to place the whole revenues at the disposal of the Assembly, on the conditions before mentioned; stated that all grievances were to be redressed; that the commissioners were not

precluded from entering into an inquiry on still graver matters; and, in short, led the French party to believe, that the Elective Legislative Council would be ultimately conceded. The party in the Legislative Council opposed to the Assembly, threw out menaces of rebellion, but the Assembly intimated that they would grant the three years' arrears and a half year in advance. This amicable state of things was unfortunately of short continuance, being entirely changed when Sir F. Head, with more straightforward policy, made public in Upper Canada, where he was lieutenant-governor, the previously quoted passage from Lord Glenelg's instructions, respecting the Elective Legislative Council, which Lord Gosford had withheld. M. Papineau, and his supporters, declared themselves to have been wilfully misled; the Assembly refused to grant more than a half-year's supply, clogged with conditions. The Legislative Council, sure of support from home, threw out the supply bill, and every other sent up to them, including that for the annual appropriation of funds devoted to national education in Lower Canada.

Stimulated by popular addresses and ultra democratic counsels, the Assembly passed the bounds of constitutional opposition; the language of the majority became violent in the extreme, fraught with denunciations of all British rule, and accompanied by treasonable appeals to the inhabitants. On the 6th March, 1837, Lord John Russell moved a series of resolutions, with the intention of bringing about a settlement, but the death of king William IV. intervened before Parliament had arrived at any decision; and as it was deemed inadvisable that the first measures of the government of our young queen should be in any degree coercive, the money for the payment of the colonial civil servants was advanced from the British exchequer, to be replaced out of the £142,000 locked up in the Canadian coffers.

In the mean time public meetings were held, and preparations were evidently making to intimidate the Government. Lord Gosford called the House of Assembly together on the 18th of August, 1837; but, unfortunately, the promised change in the Legislative and Executive Councils had not then been fulfilled; the division on government questions were in the proportions of 63 to 13, and an address of the most determined hostility was carried by 46 to 31. The leaders prepared for insurrection, and cited the example of the United States. County

meetings were convened, and the language used by the leaders being very violent, Lord Gosford dismissed 18 magistrates and 35 officers of militia. The malcontents issued a proclamation, declaring that the "wicked designs of British authorities have severed all ties of feeling for an unfeeling mother country," and that the struggle was for a democracy. Active training was going on in some districts, and the people elected their own magistrates and militia officers. The language of the press on both sides was almost equally ill-judged. A series of letters were published in the *Montreal Herald*, by Adam Thom, A.M., entitled "*Anti-Gallic*, addressed to His Excellency the Earl of Gosford, Governor-in-Chief of the Canadas.—By Camillus." These letters were "reprinted for gratuitous distribution in the Lower Provinces and in the United Kingdom." In them the whole French population of Canada are treated with sovereign contempt; and the language applied to them—that of "dastards, dupes, miserable wretches, tools, slaves, cowards, assassins, demagogues, traitors, and rebels," was circulated in every direction; the governor-general, the secretary of state for the colonies, and even the sovereign, are spoken of in terms well calculated to diminish the force of all authority; and to induce even the French to believe, that the sooner such a government was subverted, the better for both the English and French races.

At Montreal a riot took place between the "sons of liberty" and a "loyal association" formed in opposition to them; the former were defeated, and many of them wounded; the office of the *Vindicator* (a French newspaper) was destroyed, and the "loyalists" made a vigorous attempt to burn the house of M. Papineau, the democratic speaker of the House of Assembly. Exaggerated reports of these proceedings were spread through the distant counties, and caused much agitation. The Government issued warrants for the arrest of twenty-six persons, including M.M. Papineau and Viger, and five other members of the legislature. But only nine of the warrants were executed; M. Papineau and others concealed themselves, or fled the country. Instead of sending an efficient military force to aid the civil power in the execution of the warrants, a party of 18 mounted militia volunteers were sent into the centre of the most disturbed districts, St. John's-on-the-Richelieu, to effect the arrest of two ringleaders, which they

did; but on returning to Montreal, were interrupted near Longueuil by 300 well armed men, who opened a fire from behind a high fence, and wounded several of the volunteer militia; the remainder fled, and the two prisoners were rescued.

The villages of St. Denis and St. Charles were said to be the head-quarters of the rebels. Lieutenant-colonel Gore in proceeding to St. Denis, was obliged to take a circuitous route, and arrived after a long march through a marshy and difficult country, where his men often found themselves knee-deep in mud. The rebels, who were posted in a large stone house at the entrance of the village, opened a fire on the British troops, who vainly attempted to batter down the house with round shot from a howitzer. Captain Markham was wounded while leading the advance, and colonel Gore finding his ammunition failing, and his men overpowered with fatigue, having lost six killed, ten wounded, and six missing, left his cannon in the road, and retreated to Montreal. These two ill-conducted proceedings gave an unfortunate prestige to the commencement of the insurrection. If the leaders had been immediately arrested, and a sufficient force sent into the disturbed districts, which might easily (by reason of their limited extent), have been accomplished, there would, probably have been no outbreak whatever. While colonel Gore was at St. Denis, colonel Wetherall proceeded to the attack of the village of St. Charles; but being delayed by the badness of the roads, procured another company of regulars from Chambly, and on the 26th proceeded to attack about 1,000 to 1,500 insurgents, protected by fortified houses and palisades. In an hour the troops were masters of the town, 800 of the insurgents were slain, the leaders fled to the United States, and colonel Gore, with a strong force, entered St. Denis unmolested. On the frontier of the United States 200 "sympathizers" passed into Canada, but were speedily driven back by captain Kemp and the volunteers of Missisquoi county; and in a fortnight the whole of the six counties south of Montreal, which had been the chief seats of the rebellion, were restored to tranquillity. Sir J. Colborne then proceeded to two districts north of Montreal, called the "Two Mountains," and Terrebonne; and on the 14th of December marched with 1,300 regulars and volunteers against the village of St. Eustache, where about 400 of the insurgents, under a

leader named Girod, were strongly posted in a church and some neighbouring buildings. These buildings were fired, and the rebels driven out with great slaughter; the British losing only one man killed, and nine wounded. Girod committed suicide. Colonel Maitland marched to St. Benoit, a village in the Grand Brulé district, which was stated to be the focus of insurrection; but a deputation from the village met colonel Maitland, and tendered submission. Thus terminated the rebellion of Lower Canada in 1837. Many of the loyal and respectable inhabitants, French and English, on refusing to join the rebels, had been obliged to fly the country, and, in several instances, the mob plundered their houses. On the return of the "loyalists" with the British troops, they wreaked their vengeance on different villages, and many houses and much property belonging to innocent persons were destroyed.

Attention must now be directed to Upper or Western Canada. The "high tory and family compact party," had long ruled the colony, retained among themselves the seats in the Legislative Council, and preserved a dominant influence in the House of Assembly. Lord Sydenham remarked, that "members were everywhere chosen only with reference to the extent of jobbery for their particular district, which they could carry on. Whoever happens to lead a party in the House of twelve or fourteen members, may at once obtain a majority for his political views, by jobbing with other members for votes upon them, or by rejecting their jobs as the penalty of refusal oust them from their seats. This, indeed, is admitted by the best men of all parties, and especially of the popular side." A reform party had been rising in Upper Canada, opposed to the exclusive privileges naturally preserved by the British loyalists from the United States, who had settled in the colony after the War of Independence, and to whom the crown had, in return for their loyalty, granted various favours. The reformers were chiefly settlers of a recent date, emigrants from the United Kingdom, who, knowing the value of two legislative chambers, sought, not as the Lower Canadians did, to have two chambers elected by the people, but that the Legislative Council should be, in some degree, rendered responsible to, and work in harmony with, the Legislative Assembly. In the Upper as in the Lower province, the neglect of making

due and timely concessions to the public feeling, caused extreme irritation, and when those concessions were ultimately made, they were looked upon as granted from fear rather than from a sense of justice; instead of giving satisfaction, they begat new and unreasonable demands, and the people were easily led to believe by demagogues, or enthusiasts, that anything might be obtained by agitation.

The stoppage of the supplies by the Assembly of East Canada in 1833, the manner in which the proceeding was viewed at home, and the ascendancy of the reform radical party in 1834, led to the adoption of a similar measure in West Canada in 1836, and great exasperation was the result. A small party, headed by an unprincipled demagogue, named Mackenzie, avowed their desire of separating West Canada from Great Britain, and joining it to the United States.

In 1836 Sir Francis Head, then one of the poor-law commissioners in England, was selected by lord Glenelg for the government of Upper Canada. Possessed of considerable intellectual power, much force of character, strong national feelings, and great command of language, Sir Francis threw himself on the people, appealed to their good sense, stated fully his instructions from the minister of the crown, appointed three popular members to the executive council, and promised practical and immediate redress of all real grievances. The people of West Canada almost unanimously responded to the appeal, and when he dissolved the Assembly in May, 1837, the majority of those returned were decidedly favourable to constitutional government. In order to manifest confidence in the people, Sir F. Head was desirous that every soldier of the troops of the line should be removed from the province, and when a requisition was made from the Lower province, to know how many soldiers he could spare, his answer was, "all." The lieutenant-governor seems, however, to have allowed his generous enthusiasm to carry him beyond the bounds of prudence, when he caused the public arms to be deposited in the town-hall of Toronto, under charge of the mayor, without any guard for their protection; and this encouraged Mackenzie to collect 500 or 600 desperadoes on the 4th December, 1837, for a night, or morning attack on Toronto, so as to surprise the city. The rebels assembled about four miles from Toronto, at a

tavern, and endeavoured to arrest all on their way to the city, to prevent their intended assault from being made known. A distinguished officer, colonel Moodie, while passing the tavern was wounded by the rebels, and died in a few days. They also attempted to seize alderman Powell, but after shooting one of the rebels he escaped to Toronto, gave the alarm, and awoke the lieutenant-governor, who, on arriving at the town-hall, found the chief justice with a musket on his shoulder, surrounded by several other brave men ready armed, to resist any attack. Mackenzie's numbers were, as usual, greatly magnified; some stated that 3000, others that 5000 were advancing, and accordingly Sir Francis Head, and the citizens, posted themselves in the Town-hall, awaiting the morning's dawn. Mackenzie, fearing that alderman Powell would alarm the city, did not advance. On the 5th of December, 300 loyalists were mustered; lieutenant-colonel Allan M'Nab arrived with 60 men from the Gore district; by evening there were 500 armed volunteers assembled, and the militia were summoned from all parts of the country. On the 6th the lieutenant-governor sent to the rebels, urging them to lay down their arms, and thus prevent the effusion of blood. Mackenzie said he would only do so on condition of a "National Convention" being called, to which he required the assent of the lieutenant-governor before two o'clock on the ensuing day. On the 7th, the lieutenant-governor and the armed volunteers of Toronto, headed by lieutenant-colonel A. M'Nab and Mr. Justice M'Lean, the speaker of the House of Assembly, and his predecessor, whose clerk officiated as adjutant-general, marched against the rebels, who had taken their stand on an elevated position near the tavern. They were soon routed, several were killed; Mackenzie was the first to seek safety in flight, and thus began and ended the rebellion in Upper Canada. In the meantime the loyalty of the inhabitants was proved by the alacrity with which the militia, to the number of 10,000, hastened towards Toronto, but their services happily were not required, and they returned in peace to their homes, excepting a detachment commanded by colonel M'Nab, which proceeded to the London district, where it was said a notorious leader, named Duncomb, had assembled some followers. On the approach of the loyalists, the rebels submitted, and 300 laid down their arms.

The exertions of colonel M'Nab, and other gentlemen in Canada, and of the militia throughout the province, deserve high commendation. The queen expressed her majesty's royal approval of the timely exertions and gallant conduct of colonel M'Nab, by conferring on him the honour of knighthood.

Both Western and Eastern Canada were kept for some time in a state of excitement by the intrigues of a body of "Sympathizers," from the United States, some perhaps actuated by mistaken enthusiasm, but the greater number stimulated by the hope of plunder, and the promise of large tracts of land from Mackenzie, who assumed to himself the title of "Head of the Provisional Government of Canada," and joined the rebel standard at Navy Island, situated in the Niagara Channel. The rebels obtained 13 pieces of cannon, arms, and men to the number of 1,000, which were supplied from the United States, and conveyed to the island by an American steamer called the *Caroline*. Colonel M'Nab arrived with several thousand militia on the shore opposite Navy Island, but was unable to cross for want of boats. The United States Government sent general Scott to the frontier, and issued proclamations with a view to check this inexcusable invasion of the territory of a friendly power. Colonel M'Nab very properly instructed an officer of the Royal Navy, named Drew, to intercept the *Caroline* on her passage between Navy Island and the American shore while conveying recruits and stores to Mackenzie. Drew was unable to accomplish this, but he resolved to prevent the *Caroline* from being any longer made the instrument of annoyance to the flag of his country; during the night, with a small band of determined men, he attacked the steamer while moored to the American shore; carried her by boarding; killed or made prisoners all who resisted; and placed the remainder safely on shore. Drew then towed the obnoxious vessel into the middle of the stream, set her on fire, and sent her a blazing wreck over the Falls of Niagara, a fitting retribution for the unwarrantable proceedings in which the vessel had been engaged. The State of New York made a great disturbance in the matter; seized a man named M'Leod, who falsely and foolishly boasted, in an American tavern, that he had been present at the burning of the *Caroline*. The mob refused to allow him to be bailed at Lockport; he was tried for his life, and but for the fear of war with England would have been found

guilty and hanged. Mackenzie was driven from Navy Island by the militia, aided by some regular troops and artillery; and the energetic remonstrances of the English government at length induced the United States' authorities to arrest Mackenzie and Van Ranselaer; but another rebel, named Sutherland, took refuge on the island of Bois Blanc, from whence he was soon driven into the United States; and a vessel containing supplies, and rebels dignified by military titles, was captured. While these events were occurring, her majesty's government determined on the suspension of the constitution of East Canada until time could be obtained to decide on the future form of government for the province, and a council was named by the Queen to exercise the legislative functions until 1840, whose enactments were to last only until the 1st November, 1842. The Earl of Durham, then recognized in England as the head of the Reform party in the House of Peers, who possessed high reputation as a statesman, was known to have directed much of his attention to colonial subjects, whose manners were popular, who had a strong love of justice, and ardent patriotic feelings, was induced, at the urgent request of her majesty's government, to proceed to Canada, for the settlement of its troubled affairs.

Lord Durham was descended from the Lambton family, which existed in the county Durham at the time of the Conquest; but several ancestral records having been destroyed in the civil wars, the regular pedigree of the family can only be traced from the twelfth century. The heads of the house of Lambton for many years represented Durham in Parliament, and some of the younger branches served with distinction in the army. William Henry Lambton, born in 1764, was a stanch Whig, and distinguished himself in and out of parliament as the supporter of reform. In 1792 he was chairman of the "Society of Friends of the People associated for the purpose of obtaining Parliamentary Reform;" and when his own views and that of the society he represented were mis-stated, he defended himself in the words which have been so frequently quoted by his party, "From a state of confusion I have everything to lose and nothing to gain, and I must hope that neither my head is so weak, nor my heart so wicked, as to seek the misery of others at so great a personal risk. All I wish is to see this happy constitution reformed upon its own principles, *that every reparation mat*

be made in the style of the original building."

Mr. Lambton uniformly opposed British interference in the affairs of France; had his advice, and that of other great men, been attended to, England would not now be suffering under a debt of £800,000,000. He opposed the nefarious slave trade, and all measures of a cruel or oppressive nature; and, unhappily for his country, died at Pisa, 30th November, 1797, of consumption, at the age of 37. The same principles evidently actuated the conduct of his son, John George, afterwards created Earl of Durham, who was born 12th April, 1792, educated at Eton, and elected, when of age, as the representative of the county Durham. He followed in the steps of his father, and in 1821 introduced to the House of Commons a plan of Parliamentary Reform, somewhat similar to the measure adopted in 1831-2. In 1828 Mr. Lambton was created Baron Durham; on the accession of his father-in-law, the late Earl Grey, to the station of prime minister in 1830, Lord Durham became cabinet minister, with the office of Lord Privy Seal. In 1833 he was created an Earl; in 1835 sent on a special mission to Russia, whence he returned in 1837; and in 1838, with the approval of all parties, was deputed by his sovereign to represent her majesty in Canada.

His lordship arrived at Quebec 29th May, 1838, as governor-general of all the provinces of British North America, and high commissioner for "the adjustment of certain important questions depending in the provinces of East and West Canada, respecting the form and future government of the said province." The reception given to the new governor-general and high commissioner was most cordial; he visited all the principal stations as far as Niagara, and instituted full enquiries into every subject connected with the Canadas. The result was the justly famous "Report," dated "London, 31st January, 1839," which received the approbation of the queen for the "attention devoted to this important subject, and for the full and comprehensive view taken of the various interests comprised in it." The report fills 246 large 8vo pages, and, in relation to colonies, is one of the most important state documents ever issued. Many parts of it are said to be the work of the late lamented Charles Buller, who, with several other able men, accompanied Lord Durham to Canada, and assisted in diverting the minds of the people from theoretical

changes in the constitution to practical reforms, by which the union of the provinces was ultimately facilitated.

Three kinds of union were proposed by several parties in British America:—

First. A federal union of all the provinces, each retaining its existing separate legislature and most of its powers of internal legislation,—the federal power to be exercised only in matters of general concern, as expressly ceded by each of the constituent Colonies, such as custom duties, distribution of general revenues, postal arrangements, prices of land, monies, weights, measures, local laws, railroads, &c.

Second. A legislative union, or complete incorporation, of all the British provinces in North America under one legislature, exercising authority over all, as the Parliament of the United Kingdom does over England, Scotland, and Ireland; such united legislature to be, of course, subject in imperial matters to the British crown and Parliament.

Third. A union of Upper and Lower Canada alone, which would, to a great extent, amalgamate the French of the Lower or Eastern province with the Anglo-Saxon race in the Upper or Western province; would enable both to co-operate for all common purposes; give Upper Canada a communication with the sea; share the cost of her public works with the Lower province; supply the means of conducting the colonial government on an economical and efficient scale; increase the responsibility of the Executive; and give the deliberations of the united provincial legislature more weight than before with the imperial government.

Lord Durham, after carefully weighing the arguments in favour of each proposition, adopted a modification of the second and third; and urged that no time should be lost in proposing to Parliament a bill for repealing the act 31 Geo. III., restoring the union of the Canadas as one province, and under one legislature; and that the bill should contain provisions by which any or all the other colonies in North America might on application, with the consent of Canada, and on such terms as might be agreed on, join the united legislature. Lord Durham believed, that the establishment of a comprehensive system of government, and of an effectual union between all the different provinces in British North America, would produce an important effect on the general feelings of their inhabitants, by giving them some nationality of their own, and by ele-

vating these small communities into a society, which they would be unwilling to see absorbed even into one more powerful, such as the adjacent United States.

In support of the proposition of a legislative union of all the colonies, the Earl of Durham laid before the queen the following remarkable letter from the Duke of Kent, dated Kensington Palace, 30th Nov., 1814, which his lordship prefaced with the following remarks:—it may be added, that had the views entertained and urged by his royal highness on his majesty's government in 1814 been adopted, British North America would in all human probability be far more advanced in social prosperity than it now is; the French colonists would have been silently amalgamated with those of British descent; two rebellions, and the consequent expenditure of blood and treasure prevented; and the foundations of internal peace and good government ere this consolidated:—

"The views on which I found my support of a comprehensive union have long been entertained by many persons in these Colonies, whose opinion is entitled to the highest consideration. I cannot, however, refrain from mentioning the sanction of such views by one whose authority Your Majesty will, I may venture to say, receive with the utmost respect. Mr. Sewell, the late Chief Justice of Quebec, laid before me an autograph letter addressed to himself by Your Majesty's illustrious and lamented father, in which his Royal Highness was pleased to express his approbation of a similar plan then proposed by that gentleman. *No one better understood the interests and character of these Colonies than his Royal Highness*; and it is with peculiar satisfaction, therefore, that I submit to Your Majesty's perusal the important document which contains his Royal Highness's opinion in favour of such a scheme:—

'Kensington Palace, 30 Nov. 1814.

'MY DEAR SEWELL,

'I have this day had the pleasure of receiving your note of yesterday, with its interesting enclosure: nothing can be better arranged than the whole thing is, *or more perfectly I cannot wish*; and, when I see an opening, it is fully my intention to hint the matter to Lord Bathurst, and put the paper into his hands, without, however, telling him from whom I have it, though I shall urge him to have some conversation with you relative to it. Permit me, however, just to ask you whether it was not an oversight in you to state that there are *five* Houses of Assembly in the British Colonies in North America? for if I am not under an error, there are *six*, viz. Upper and Lower Canada, Nova Scotia, and New Brunswick, the islands of Prince Edward and Cape Breton. Allow me also to beg of you to put down the proportions in which you think the thirty members of the Representative Assembly ought to be furnished by each province; and, finally, to suggest whether you would not think two Lieutenant-Governors, with two Executive Councils, sufficient for the Executive Government of the whole, viz. one for the two Canadas, and one for Nova

Scotia and New Brunswick, comprehending the small dependencies of Cape Breton and Prince Edward's Island; the former to reside at Montreal, and the latter at whichever of the two situations may be considered most central for the two provinces, whether Annapolis Royal or Windsor. But, at all events, should you even consider four Executive Governments, and four Executive Councils requisite, I presume there cannot be a question of the expediency of comprehending the two small islands in the Gulf of St. Lawrence with Nova Scotia.

'Believe me ever to remain, with the most friendly regard,

'My dear Sewell, yours faithfully,
(Signed) 'EDWARD.'

Lord Durham recommended that a general executive on an improved principle should be established, together with a supreme court of appeal for all the North American colonies; that the Legislative Council be revised by Parliament, so as to secure not only its effective working, but its acting as a useful check on the popular branch of the legislature, and thus prevent a repetition of those collisions which had already caused such dangerous excitement. Whether the governor-general's ideas were favourable to an Elective Legislative Council, does not appear; but it is evident that he was adverse to their existing constitution. The principle of a responsible executive was strongly enforced by his lordship, who contended that all the principal officers of the government, except the representative of the crown and his secretary, should be responsible to the united legislature; that the governor should be instructed he must carry on his government by heads of departments, in whom the legislature reposed confidence, and that "*he must look for no support from home in any contest with the legislature, except on points involving strictly imperial interests.*"

The governor-general rightly advocated the establishment of the independence of the judges, by giving them the same tenure of office and security of income as that enjoyed in England; advised that *all the revenues of the crown*, except those derived from the sale of crown lands (which he wished confided to imperial authority for the promotion of emigration), should at once be given up to the united legislature, on the concession of an adequate civil list, and that no money votes should be allowed to originate without the previous consent of the crown; the governor-general also suggested that the Act of Union should repeal past provisions with respect to the clergy reserves, and define the application of the funds arising

therefrom. The necessity of local government by elective bodies was not overlooked by him, and the advantages of a large and beneficent system of emigration for the relief of the mother country, as well as for the benefit of the colonies, was powerfully urged: Lord Durham said, "I see no reason for doubting that by good government, and the adoption of a sound system of colonization, the British possessions in North America may be made the means of conferring on the suffering classes of the mother country many of the blessings which have hitherto been supposed to be peculiar to the social state of the new world." The establishment of a steam-packet communication between Halifax and England was strongly advocated by the governor-general, and also the formation of a railroad from Halifax to Quebec. To the assertions made that it was probable a colonial legislature thus strong and self-governing would desire to abandon the connection with Great Britain, the noble earl replied, that, on the contrary, he believed that the cessation on our part from undue interference, would strengthen the present bond of feelings and interests, and that the connection would only become more durable and advantageous, by having more of equality, of freedom, and of local independence. He looked to the increased power and weight that would be given to the Canadas by union, as the *only* means of fostering such a national feeling throughout them, as would effectually counterbalance whatever tendencies may now exist towards separation; and as a true lover of freedom, he nobly added—"But, at any rate, our first duty is to secure the well-being of our colonial countrymen; and if in the hidden decrees of that wisdom by which the world is ruled, it is written that these countries are not for ever to remain portions of the empire, we owe it to our honour to take good care that when they separate from us, they should not be the only countries on the American continent in which the Anglo-Saxon race shall be found unfit to govern itself." While engaged in the fulfilment of his highly important mission, the governor-general, with a view to bring about an amnesty and restore internal peace, offered to several of the leaders in the late rebellion, charged with high treason, that if they made a confession of guilt, voluntarily deported themselves to Bermuda, remained there under strict surveillance, and agreed not to return to Canada, they should not be put on their trial, for which

indeed it would have been difficult to obtain an impartial jury. The prisoners, including Wolfred Nelson, Bouchette, Gauvin, Viger, and others, then lying in the jail of Montreal, accepted these conditions, and signed a paper, promising to abide by them. Papineau, Côte, Gagnon, and several others implicated in the late rebellion, had left the country. The conduct of Lord Durham in this matter created much excitement in the House of Lords, and was used as a weapon of party politics by the opponents of the then existing administration. Lord Brougham, viewing the subject as a lawyer, introduced a bill into the House of Lords, which declared the ordinance passed by Lord Durham and his Council, viz., 2 Vic. c. 1, entitled, an "ordinance to provide for the security of the province of Canada" illegal, because it adjudged men worthy of death without a trial, and sentenced them to transportation to a colony beyond the jurisdiction of the governor-general. Lord Melbourne, then prime minister, opposed the passing of this bill, but her majesty's government was defeated by a majority in the House of Lords. The ordinance was annulled, and an Act of Indemnity for Lord Durham and his Council was passed. Her majesty's government, in transmitting the announcement of these proceedings to the governor-general, accompanied it by strong expressions of general approbation and unaltered confidence in the administration of his lordship. Lord Durham, who had previously received despatches, formally conveying to him assurances of the satisfaction which *all* his measures, *including the ordinance and proclamation relating to the political prisoners, had given to her majesty's government*, complained bitterly of these proceedings; asserted the legality of the ordinance; and declared with a degree of asperity which the circumstances of the case excuse, though they may not be deemed a sufficient justification:—that the ordinance of the special Council for sending the prisoners to Bermuda, and the proclamation of amnesty issued on the day of the coronation of her majesty, were parts of the same measure, and were divided solely for the purpose of imposing on the governor-general and his Council all that required legislation and was of a penal nature, and of making all that partook of mercy and kindness the act of the queen; that consequently the disallowance of the ordinance had rendered null all the *repressive* portion of his policy, and that the uni-

versal proclamation of amnesty, limited by no exceptions save those now invalidated, placed the leaders of the rebellion precisely in the same position which they occupied before their unsuccessful attempt. Under these adverse and discouraging circumstances, the governor-general did not consider that he could usefully remain longer in Canada,—he felt that his authority was weakened—that both the act of indemnity and the annulling of the ordinance were rebukes which would damage his future administration, and he deemed it due to his character to return to England at once, especially as lieutenant-general Sir John Colborne, his predecessor, was still in the province as commander of the forces, and no injury whatever could accrue to the public service by the resignation of the governor-general and his departure for England. The noble earl never recovered the shock which he sustained by these proceedings in Canada, and he died in England, 28th July, 1840.

I may perhaps be excused for inserting here the following remarks, written at the period of his death, when examining the public proceedings of one of the best friends of the colonies, and most earnest promoters of colonization, which this century has produced—to whose liberality England mainly owes our present possession of New Zealand:—

“By birth and inclination Lord Durham was one of the earliest advocates of political and popular reform, and to his credit be it said, he was ever foremost to aid the cause of the oppressed. At a period when few men stood forward to oppose the encroachments of ministerial power, Lord Durham was always the staunch opponent of oppression, whether individual or national. Endowed with a generous disposition, he was prompt to relieve distress, and unhesitatingly spent his wealth on objects which he thought conducive to the good of his country. There was no niggard or parsimonious spirit in his proceedings, whenever it could be proved that money or energy could advance the cause he took in hand; and an unsullied integrity, and a lofty patriotism, were among the distinguishing characteristics of this lamented nobleman.”

The departure of Lord Durham, the knowledge of his first act having been disallowed at home, and probably an artful misrepresentation to the Canadian people, of the reasons which led to his retirement, induced the malcontents to endeavour to effect a

general rising in the counties of Montreal on the 3rd of November; but the attempt failed; except at Napierville, where about 4000 were collected under three rebel leaders, named Dr. Robert Nelson, Côte, and Gagnon, who detached 400 men to the frontier, to open a communication with the “sympathisers” in the United States. A body of British volunteers near the frontier, attacked and defeated the rebels; Dr. Nelson marched with 900 men to aid his colleagues, but the British volunteers posted at Odell Town chapel, to the number of 200, checked his advance, and after an action of two hours and a half, the rebels retreated with the loss of 100 men in killed and wounded; the loyalists had 1 officer and 5 men killed, and 9 wounded.

Major-general Sir James M'Donnell, with seven regiments of the line, marched on Napierville; the enemy dispersed without firing a shot; but subsequently made a stand at Beauharnois, from which they were driven by a detachment composed of 1000 men of the regular troops and Glengarry fencibles, with the loss of two killed and two wounded. Within one week (on the 11th of November) major-general M'Donnell announced the restoration of tranquillity in the Lower province. In the Upper province Sir Francis Head resigned the office of lieutenant-governor, in consequence of Lord Glenelg's disapprobation of his removal of Judge Ri doubt from the bench, on account of the expression of democratic principles, and of his declining to raise to the bench Mr. Bidwell, late speaker of the House of Assembly, and a leader of the opposition. The retirement of Sir F. Head was much regretted in Canada: he was succeeded by Sir George Arthur, who had acquired considerable experience as chief superintendent in Honduras, and as governor of Van Diemen's Island, and whose steady and consistent conduct, excellent business habits, and conciliatory manners, had acquired for him in each position, the esteem of the people, and the approbation of the home authorities.

In the beginning of June more than 1000 American plunderers and bandits crossed into Upper Canada, attacked a party of 14 lancers, and compelled their surrender, setting on fire an inn which sheltered them; the whole country rose, and on the advance of the British the invaders recrossed the frontier. At the end of June another band passed the St. Clair and

entered the Western district, but finding the people opposed, and the militia advancing, they fled. In November, when the insurrection occurred in the Lower province, 400 of the American brigands landed at Prescott, and were dispersed by colonel Young and captain Sandom, R.N., but some took refuge in a windmill, a strong stone house with walls three feet thick. Eighteen of the British were killed and wounded in attempting to carry the place, and it was not until cannon and additional troops arrived that the enemy, to the number of 159, surrendered at discretion. On the 4th of December between 300 and 400 of these marauders, having been organized at Detroit, crossed over into Canada near the town of Sandwich, burnt a steamer, and murdered several of the British subjects in cold blood. A party of militia arrived, and they retreated with the loss of 26 killed and 25 prisoners.

It now became evident that the government of the United States was totally unable to prevent its citizens making these cruel and cowardly attacks on the subjects of a state with whom it professed to be at peace; the Americans taken prisoners had heretofore been treated with mistaken lenity: but Sir George Arthur, in accordance with the wishes of the province, treated the marauders as a shepherd would treat wolves. Several of the Americans were tried by court-martial and hanged, and others were transported to Australia or imprisoned. The American government left them to their fate.

Thus ended a state of disturbance in Canada, which excited much anxiety in England, where all the proceedings were greatly magnified, and which has thrown back the province a full quarter of a century by the alarm created, and the consequent driving of capital and industry from the country. It should, however, be remembered, that the rebellion in East Canada was the work of a few individuals, and, probably, was not supported by ten thousand persons out of a population of half a million. The Roman Catholic bishop of Montreal issued and published an address to his flock, which had a powerful effect in preventing the spread of rebellion. Lieutenant-general Sir John Colborne, the commander-in-chief, thus describes the conduct of the Catholic clergy during this important period, in a despatch to the secretary of state, dated 8th June, 1839,—“There are few instances in the parishes which have been agitated in which

a want of loyalty has been shown by the priests; indeed, it cannot be denied that they have, with two or three exceptions, acted with great firmness, and have exerted their influence in favour of the government. The field officers of the militia, with few exceptions, are also loyal subjects, and, indeed, many of the officers of militia.”

The leaders of the insurrection, in both Eastern and Western Canada, partook more of the character and doctrines of the “Red Republicans” and “Socialists,” for which France has been unhappily distinguished in 1849, than those of men struggling for constitutional freedom. An association termed the “Sons of Liberty,” paraded the streets of Montreal in a threatening manner, inciting the young and ignorant to join them; declaring that “a glorious destiny awaits the young men of these colonies; to disfranchise our beloved country from all human authority, except that of the bold democracy within its bosom.” The ignorant country people had, for several years, been drugged with such doctrines; and hopes had been held out by some of the leaders, of the abolition of the feudal system.

It will be necessary to dwell at some length on the subsequent events in the history of Canada, and on the policy then pursued under the guidance of Lord John Russell as her majesty’s Secretary of State for the Colonies; because it involves the working of the principle of “*responsible government*,” then, for the first time, effectually carried out in the administration of that colony, and which is now in the course of application to other dependencies of the British empire. The imperial government, on mature deliberation, adopted the recommendation contained in Lord Durham’s report for a reunion of West and East Canada into one province, and in 1839 a bill was introduced into the House of Commons for the accomplishment of this object.

Mr. Pitt’s views in dividing the provinces in 1791 had evidently failed; or the increase of a British population in Western Canada, and the state of affairs in Eastern Canada rendered it no longer advantageous, or even possible, to maintain the disunion. There was also a strong reason for the union, with regard to West Canada;—its annual revenue was largely pledged for the payment of public debts incurred for the improvement of the province by the construction of canals and other public works. Canals had been undertaken for the conveyance of produce,

which maintained a great extent of water communication uninterrupted; the *Welland* canal obviated the interruption caused by the falls of Niagara, and the *Cornwall* canal avoided the rapids in the river St. Lawrence, between Kingston in Western Canada and Montreal in Lower or Eastern Canada. To carry out its public works the colonial debt had, from year to year been increased; and in 1839 the charge for the annual interest of debt was £85,000; while the whole yearly revenue of Western Canada was only £78,000, which could not be increased by Customs duties, as the seaport of Quebec was in the East province. Western Canada was therefore on the eve of bankruptcy. On this and other points it was found that her majesty's government required full information, which could only be obtained on the spot from a man of unprejudiced views, practically acquainted with commerce and finance; and possessed of the confidence of her majesty's ministers. Their choice devolved on Mr. Charles Poulett Thomson, then President of the Board of Trade, who was offered either the Chancellorship of the Exchequer, or the government of Canada. Mr. Thomson decided on the latter, partly on account of his health, which he deemed unequal to the onerous duties of the former, and partly because he considered Canada the finest field of exertion, and likely to afford him great power of doing good to his fellow-creatures. The antecedents of Mr. Thomson's life had well fitted him for the high office he undertook to fill. Descended from one of the oldest and most respected merchants in the city of London, whose firm (Thomson, Bonar, and Co.) had for several generations been engaged in the Russian trade, Mr. Thomson had been early initiated into the habits of commercial life. At 16 years of age, his father, Mr. John Poulett Thomson, sent him to St. Petersburg, to commence business at the branch house there, then under the management of an elder brother, Mr. Andrew Thomson. In 1817, after two years' residence in the Russian capital, Mr. C. P. Thomson's health, at all times very delicate, obliged his return to England, and his wintering in Italy.

From 1817 to 1821 his time was passed partly at the counting-house in London, and partly in travelling on the continent: and from 1821 to 1824 in the counting-house at St. Petersburg, and in visiting Russia, Germany, &c. On the death of his father in May, 1824, Mr. C. P. Thomson returned to

England, joined the London firm as a partner, and entered into the active life of a London merchant. He became a director of several public companies, and was actively instrumental as such in the Provincial Bank of Ireland (founded in 1824 by Mr. Medley), where he acquired valuable information connected with banking and financial details. A great truth once sent forth on the wings of public opinion is sure sooner or later to operate for good, and the efforts of Mr. Thomson on the important subject of our revenue and fiscal system led the way and suggested the mode of remodelling entirely the prohibitive and protective system on which our commercial as well as financial code was then constructed.

On the death of Mr. Huskisson in 1830, Mr. Thomson was chosen by his party (the Whigs) to carry out the views of that great statesman; and for this high task he was well fitted, by previous study and practical experience—by great moral courage—remarkable industry—and a deep sense of responsibility. The retirement of the administration of the Duke of Wellington in 1830, and the formation of a cabinet by Earl Grey, led to Mr. Thomson's appointment as Vice-President of the Board of Trade and Treasurer of the Navy, and at the end of the same year Mr. Thomson finally withdrew from the commercial firm of Thomson, Bonar, and Co. It is not requisite to enter here into an examination of his career as Vice, and subsequently as President of the Board of Trade; suffice it to say, that in conjunction with the late lamented Lord Althorp, then chancellor of the exchequer, he carried out various useful acts.

In 1826, Mr. Thomson was returned to parliament as member for Dover, and judiciously remained silent for nearly two sessions, watching the progress of events. In 1828, he made a few pithy speeches, rightly judging, as he expressed it in a letter to his brother George, of 28th February, 1828, that "a man who tells the House facts with which the majority are unacquainted, is sure to be listened to." His speeches on the shipping interest, 7th May, 1827; on the usury laws, 20th May; on Scotch and Irish banking, 18th June; on reducing the duty on Indian silk goods to a minimum duty of 30 per cent., 16th July, 1828; and on the silk trade, 14th April, 1829, all told upon the house, and gained for Mr. Thomson that which is seldom acquired—a parliamentary commercial reputation. On the 25th March,

1830, Mr. Thomson delivered a remarkable speech on the general taxation of the empire, a speech replete with facts, then most difficult of attainment, and enunciating sound views of financial economy. Looking at our present comparatively simple fiscal system, it is difficult to conceive anything more absurd, more onerous, more injurious to trade or industry, than the revenue system of Great Britain in 1830; and much credit is due to Mr. Thomson for his exposure of many errors in the policy then pursued.*

In 1839, Mr. Thomson's health became much impaired by constant labour and mental anxiety acting on a naturally feeble constitution; added to which, his position as member for Manchester from 1832, must have increased considerably the duties of his public life. By patient toil and judicious conduct, without aristocratic connections, he had worked out for himself the high position of a cabinet minister, and on the elevation of Mr. Spring Rice to the peerage, the great object of his ambition, namely, the position of Chancellor of the Exchequer, was offered for his acceptance; fortunately for our colonies, he preferred the appointment of "Governor-General of British North America, and Captain-General and Governor-in-Chief in and over the Provinces of Lower Canada and Upper Canada, Nova Scotia, New Brunswick, and the island of Prince Edward, and Vice-Admiral of the same."

On 30th August, 1839, and on his fortieth birth-day, Mr. Thomson sailed in the *Pique* frigate from England, arrived at Quebec, received public addresses, and on 22nd October proceeded to Montreal. Great excitement and discontent prevailed in both provinces. The British and French Canadians in East Canada, who had taken no part in the recent rebellion, were naturally anxious for the restoration of constitutional government, the misled French Canadians who had been induced to join in the insane attempt at rebellion, were kept in constant agitation by their leaders; and in the Western province, which the new governor-general visited in November, he found the people in the state thus described by the lieutenant-governor, Sir George Arthur, in his despatch, dated the 22nd September, 1839. "All the wicked heads on both sides are constantly at work plotting mischief; and many

inconsiderate persons by the course they are now pursuing at the 'responsible government' meetings, promote the designs of the most criminal characters. The foundations of civil order were broken up by the occurrences of the year 1837, and general mistrust and bad feeling open out a way for the display of the worst passions of the worst men, of which they seem keenly disposed to avail themselves."

The position of the government was therefore very critical; the "family compact men" viewed Mr. Thomson with suspicion, and there was no settled party on whom he could rely for aid in his administration. His strong powers of perception speedily enabled the governor-general to appreciate the true state of the Canadas, both as regarded their internal government, and their position with respect to the United States. He concurred with Lord Durham in considering that the salvation of the provinces as dependencies of the British crown, and their future peace and prosperity, depended on their being reunited on the broad basis of justice to all. He also adopted Lord Durham's view of the necessity of making the Executive Council harmonise with the House of Assembly, by rendering the higher officers of the executive government dependent as in England on the majority in the House of Representatives, thus giving the people not only a general control over their own affairs, but affording them the means of declaring in whom they placed confidence for their administration. The course adopted by the governor-general was in unison with his manly character; he convened the Special Council of the Eastern province, which had been appointed by his predecessor on the suspension of the constitution; abstained from adding a single name to the council, in order to avoid imputations, and to give due weight to its decisions in England, and laid before them certain resolutions as the basis of union; namely, that a civil list should be granted by the crown, that the debt of Western Canada, should be borne by the united province; and that the details of the Union Bill should be settled by the imperial legislature. These resolutions were adopted by a majority of 12 to 3, after several days' discussion, in October, 1839, and the governor-general then proceeded to Toronto, in the Western province, and on the 3rd December, 1839, convened the Parliament which had been elected in 1836, under the administration of Sir F. B.

* See the "Taxation of the British Empire," by R. M. Martin.

Head. Previous to meeting his parliament, the governor-general deemed it expedient to promulgate the celebrated despatch of Lord John Russell, dated the 16th October, 1839, which declared that the tenure of certain high ministerial offices, such as colonial-secretary, treasurer, sergeant-general, attorney and solicitor-general, sheriff, or provost-marshal, and also the position of members of Council, should no longer be considered as a tenure for life, or during good behaviour, but that, "not only such officers will be called upon to retire from the public service, as often as any sufficient motives of public policy may suggest the expediency of that measure, but that a change in the person of the governor, will be considered as a sufficient reason for any alterations which his successor may deem it expedient to make in the list of public functionaries, subject of course to the future confirmation of the sovereign."

The adoption of this policy had become absolutely essential in both provinces, for the chief offices of the government and the seats in the Legislative Council were looked upon almost as hereditary rights, and such members of the executive government as were members of the Provincial Parliament, spoke and acted in their individual capacity without the slightest reference to the views or wishes of the governor, who was not unfrequently denounced for having friends in the gallery of the Houses of Parliament to acquaint him with the proceedings, and inform him of the speeches of the members. Such a state of things, it was evident, could not be tolerated, and rendered the authority of the governor a nullity, as the Assembly was split into half a dozen different parties, and he frequently had not one man to depend on as the representative of his policy. Several of the executive members had previously been opposed to the union; but on Mr. Thompson's promulgating the above-mentioned despatch of her majesty's Secretary of State for the Colonies, Lord John Russell, they agreed to support the union, and *retain office*. The conditions proposed to the parliament of Upper Canada were (1) equality of representation for each province; (2) the grant of a civil list to be settled by the Imperial Parliament; and (3) equal division of the public debt. These were carried in the Legislative Council by a majority of 14 to 8, and of the minority all but two were inhabitants of Toronto, who were adverse to the union, because it would

deprive their city of being the seat of local government.

The House of Assembly did not so readily agree to the terms: they required that West Canada should be the seat of government; that the franchise should be restricted to those holding their lands in free and common soccage (which would have disfranchised nearly the whole of the French Canadians who held their lands under feudal tenures); that West Canada should return 62 members, as at present, with a right of adding new members as population increased, but that East Canada should return no more than 50 members; and that the English language should alone be spoken and used in the legislature, in courts of justice, and in all public proceedings. The object was the annihilation of the French Canadian party by an arbitrary enactment; and as very few of the French Canadians understood English, the exclusion of their language from public proceedings would have been a great injustice. To these propositions the governor-general was decidedly opposed; his desire was to conciliate all parties, and he well knew that this most difficult object could only be attained by a firm adherence to the most strict principles of justice.

After many debates and adjournments the governor-general had the satisfaction of seeing his resolutions carried, with a slight alteration, by an almost unanimous vote; and on the 22nd of January, 1840, he transmitted to her majesty's government a draft bill for the act of union. While the measure was being discussed in the Imperial Parliament, the governor-general proceeded to redress several grievances, and settle some disputes of long standing. Among the most prominent was that concerning the land reserved for the clergy of the established church, which had been contested by the Scotch church, the Dissenters, and the Roman Catholics for 25 years, and it was desirable to bring the question to an issue before the union took place. The governor-general was opposed to the proposition generally entertained of converting the clergy reserved lands into a fund for general education, as religion would thus be deprived of the only existing means for the support of its ministers and the promulgation of its doctrines; he, therefore, brought forward and obtained the assent of his Parliament in the Assembly by a majority of 30 to 20, and in the Council of 14 to 5,

to a bill which distributed the clergy reserves among the religious communities recognised by law, in proportion to their respective numbers; and this bill was passed by the Imperial Legislature, in whom alone resided the power of making this distribution valid. The governor-general now proceeded to East Canada, summoned the Special Council, and by infusing his spirit into that body induced it to pass, in a few weeks, several useful laws. Among the measures proposed to be established by the ordinances of the Special Council, were the incorporation of the cities of Quebec and Montreal (the former corporations having been allowed to expire during the dissensions of 1836); the incorporation of the seminary of St. Sulpice in order to provide for the gradual extinction of the seigneurial dues in the city and island of Montreal, which had been granted in 1663 for the conversion of the Indians, and the ecclesiastical superintendence of the island of Montreal.

The establishment of municipal institutions and of land registration offices for readily ascertaining mortgages, were urgently pressed by the governor-general as measures of vital importance. The state of things in East Canada at this time, is described by Mr. Thomson in a private letter as follows:—"No man looks to a practical measure of improvement. Talk to any one upon education, or public works, or better laws, you might as well talk Greek to him. Not a man cares for a single practical measure, the only end, one would suppose, of a better form of government. They have only one feeling—a hatred of race. The French hate the English, and the English hate the French, and every question resolves itself into that, and that alone. There is, positively, no machinery of government; everything is to be done by the governor and his secretary. There are no heads of departments at all, or none whom one can depend on. The wise system heretofore adopted has been to stick two men into some office whenever a vacancy occurred—one a Frenchman, and the other a Britisher! Thus we have joint crown surveyors, joint sheriffs, &c., each opposing the other in everything he attempts." To eradicate, as far as possible, this estrangement was the great aim of Mr. Thomson, as it has since been that of his successors, Lords Metcalfe and Elgin.

The measures of the governor-general had given entire satisfaction to her majesty's

government, as they had done generally throughout Canada; and the Queen was pleased to raise him to the peerage, by the title of Baron Sydenham in Kent, and Toronto in Canada; an honour which it was rightly deemed advisable to announce with the declaration of the union of the two provinces, made by Lord Sydenham at Montreal, on the 10th of February, 1841, the anniversary of the marriage of our gracious sovereign, and of the conclusion of the treaty of 1763, by which Canada was ceded to the British crown. The provisions of the Act will be found in the section on Government. The following is a copy of the celebrated despatch of Lord John Russell to the governor-general on "Responsible Government," which has been so much canvassed, and which forms the basis of constitutional and colonial government:—

"Downing Street, 14th Oct. 1839.

"Sir,

"It appears from Sir George Arthur's despatches that you may encounter much difficulty in subduing the excitement which prevails on the question of what is called 'Responsible Government.' I have to instruct you, however, to refuse any explanation which may be construed to imply an acquiescence in the petitions and addresses upon this subject. I cannot better commence this dispatch than by a reference to the resolutions of both houses of Parliament, of the 28th April and 9th May, in the year 1837.

"The Assembly of Lower Canada having repeatedly pressed this point, her majesty's confidential advisers at that period thought it necessary not only to explain their views in the communications of the Secretary of State, but expressly called for the opinion of Parliament on the subject. The Crown and the two houses of Lords and Commons having thus decisively pronounced a judgment upon the question, you will consider yourself precluded from entertaining any proposition on the subject.

"It does not appear, indeed, that any very definite meaning is generally agreed upon by those who call themselves the advocates of this principle; but its very vagueness is a source of delusion, and if at all encouraged, would prove the cause of embarrassment and danger.

"The constitution of England, after long struggles and alternate success, has settled into a form of government in which the prerogative of the Crown is undisputed, but is never exercised without advice. Hence the exercise only is questioned, and however the use of the authority may be condemned, the authority itself remains untouched.

"This is the practical solution of a great problem, the result of a contest which from 1640 to 1690 shook the monarchy, and disturbed the peace of the country.

"But if we seek to apply such a practice to a colony, we shall at once find ourselves at fault. The power for which a minister is responsible in England is not his own power, but the power of the Crown, of which he is for the time the organ. It is obvious that the executive councillor of a colony is in a situ-

ation totally different. The Governor under whom he serves, receives his orders from the Crown of England. But can the colonial council be the advisers of the Crown of England? Evidently not, for the Crown has other advisers, for the same functions, and with superior authority.

"It may happen, therefore, that the Governor receives at one and the same time instructions from the Queen, and advice from his executive council, totally at variance with each other. If he is to obey his instructions from England, the parallel of constitutional responsibility entirely fails; if, on the other hand, he is to follow the advice of his council, he is no longer a subordinate officer, but an independent sovereign.

"There are some cases in which the force of these objections is so manifest, that those who at first made no distinction between the constitution of the United Kingdom, and that of the colonies admit their strength. I allude to the questions of foreign war, and international relations, whether of trade or diplomacy. It is now said that internal government is alone intended.

But there are some cases of internal government, in which the honour of the Crown or the faith of Parliament, or the safety of the state, are so seriously involved, that it would not be possible for Her Majesty to delegate her authority to a ministry in a colony.

"I will put for illustration some of the cases which have occurred in that very province where the petition for a responsible executive first arose—I mean Lower Canada.

"During the time when a large majority of the assembly of Lower Canada, followed M. Papineau as their leader, it was obviously the aim of that gentleman to discourage all who did their duty to the Crown within the province, and to deter all who should resort to Canada with British habits and feelings from without. I need not say that it would have been impossible for any minister to support, in the Parliament of the United Kingdom, the measures which a ministry, headed by M. Papineau, would have imposed upon the Governor of Lower Canada; British officers punished for doing their duty; British emigrants defrauded of their property; British merchants discouraged in their lawful pursuits,—would have loudly appealed to Parliament against the Canadian ministry, and would have demanded protection.

"Let us suppose the Assembly as then constituted, to have been sitting when Sir John Colborne suspended two of the judges. Would any councillor, possessing the confidence of the Assembly, have made himself responsible for the act? And yet the very safety of the province depended on its adoption. Nay, the very orders of which your Excellency is yourself the bearer, respecting Messrs. Bedard and Panet, would never be adopted, or put in execution by a ministry depending for existence on a majority led by M. Papineau.

"Nor can any one take upon himself to say that such cases will not again occur. The principle once sanctioned, no one can say how soon its application might be dangerous, or even dishonourable, while all will agree that to recall the power thus conceded would be impossible.

"While I thus see insuperable objections to the adoption of the principle as it has been stated, I see little or none to the practical views of colonial government recommended by Lord Durham, as I understand

them. The Queen's Government have no desire to thwart the representative assemblies of British North America in their measures of reform and improvement. They have no wish to make those provinces the resource for patronage at home. They are earnestly intent on giving to the talent and character of leading persons in the colonies, advantages similar to those which talent and character, employed in the public service, obtain, in the United Kingdom. Her Majesty has no desire to maintain any system of policy among her North American subjects which opinion condemns. In receiving the Queen's commands, therefore, to protest against any declaration at variance with the honour of the Crown, and the unity of the empire, I am at the same time instructed to announce Her Majesty's gracious intention to look to the affectionate attachment of her people in North America, as the best security for permanent dominion.

"It is necessary for this purpose that no official misconduct should be screened by Her Majesty's representative in the provinces; and that no private interests should be allowed to compete with the general good.

"Your Excellency is fully in possession of the principles which have guided Her Majesty's advisers on this subject; and you must be aware that there is no surer way of earning the approbation of the Queen, than by maintaining the harmony of the executive with the legislative authorities.

"While I have thus cautioned you against any declaration from which dangerous consequences might hereafter flow, and instructed you as to the general line of your conduct, it may be said that I have not drawn any specific line beyond which the power of the Governor on the one hand, and the privileges of the Assembly on the other, ought not to extend. But this must be the case in any mixed government. Every political constitution in which different bodies share the supreme power, is only enabled to exist by the forbearance of those among whom this power is distributed. In this respect the example of England may well be imitated. The sovereign using the prerogative of the Crown to the utmost extent, and the House of Commons exerting its power of the purse, to carry all its resolutions into immediate effect, would produce confusion in the country in less than a twelvemonth. So in a colony: the Governor thwarting every legitimate proposition of the Assembly; and the Assembly continually recurring to its power of refusing supplies, can but disturb all political relations, embarrass trade, and retard the prosperity of the people. Each must exercise a wise moderation. The Governor must only oppose the wishes of the Assembly where the honour of the Crown, or the interests of the empire are deeply concerned; and the Assembly must be ready to modify some of its measures for the sake of harmony, and from a reverent attachment to the authority of Great Britain.

"I have, &c.,

J. RUSSELL."

Lord Sydenham, when announcing the union, issued a spirited proclamation, and appealed to the good feelings and interests of the Canadians to render the union productive of the advantages which it was the desire of the queen and of her majesty's government it should confer.

The governor-general summoned the



FRANCIS BACON, VISCOUNT ST ALBAN.

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FROM THE ORIGINAL OF VAN SOMER IN THE COLLECTION OF

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united legislature to meet him at Kingston on 13th June, 1841; violent party strife or rather contests of race took place at the elections in which the governor-general abstained from interfering, except to maintain order and to protect the free exercise of the franchise. The composition of the House of Assembly when it met was said to be: government members 24, French members 20, moderate reformers, 20, ultra reformers 5, "family compact" 7, doubtful 6, special return 1, double ditto 1; total 84. The governor-general opened the session in a speech of much moderation, advised conciliation, announced that Great Britain had agreed to pledge its credit for a loan of £1,500,000 to complete the public works, that assistance would be afforded by the home government to convey destitute emigrants from the port of embarkation to the place where their labour might be required; declared, in reference to M'Leod and the United States, "her majesty's fixed determination to protect, with the whole might of her power all her Canadian subjects; pointed out the necessity of establishing throughout the province a system of self-government such as had already been established in East Canada; the establishment of a comprehensive and efficient system of education, and concluded with a prayer that, "under the blessing of that Providence which had hitherto preserved this portion of the British dominions, their counsels might be guided so as to insure to the queen attached and loyal subjects, and to United Canada a prosperous and contented people."

Notwithstanding these conciliatory measures and proceedings, an attempt was made by Mr. Neilson, the representative of Quebec, by an amendment on the speech from the throne, to condemn the Act of Union as "inconsistent with justice and the common rights of British subjects." Mr. Neilson's amendment was rejected by 50 to 25, 18 of the minority were French Canadians, or represented French constituencies, 6 were of the extreme Upper Canada party, and 1 was member for Gaspé. Another similar amendment was rejected by 54 to 21. The Assembly then proceeded to discuss a bill brought in by Sir Allan M'Nab to extend the time for receiving petitions on contested elections, in consequence of some defeated candidates having been too late in presenting their petitions in the only form in which they could be received by the Assembly. The measure was a party move, and was termed the "French

Election Bill." Owing to misconception and other reasons the government were unable to defeat the bill, which passed the House of Assembly, and was sent up to the Legislative Council for discussion and confirmation. The upper house rejected the bill, and the harmonious working of two legislative chambers was established; the upper judiciously acting as a check on hasty or party legislation in the lower chamber.

The United Parliament of Canada now proceeded to work; the governor-general introduced through his executive officers various bills for revising the custom laws; readjusting the currency; educating the people; creating an efficient "Board of Works" for the whole province, which would take the power of jobbing out of the hands of local parties and private individuals; a municipal district bill, &c.; and the first session closed triumphantly for the governor-general, and happily for Canada, in peace and reviving prosperity. But Lord Sydenham's constitution, never very strong, gave way after two years of incessant labour; he was unable to close Parliament in person, which was done by general Clitherow on 17th Sept., 1841, and on the 19th of the same month, Canada lost one of the most able men who ever administered its affairs—the crown a valuable servant, and the nation a true patriot—whose devotion to the interests of his country was manifested up to the moment of his death.

The immediate cause of the decease of Lord Sydenham was owing to his horse falling with him, on 4th September, fracturing his leg, and causing a severe wound above the knee. His lordship finding his health fast failing, had, in July, 1841, sent home his resignation, which had been graciously accepted by the queen, who had conferred on him the order of the Bath, and while waiting the closing of Parliament and the arrival of the *Pique* frigate from Halifax to convey him to England, the accident occurred which suddenly terminated the labours of his useful life at the age of forty-two.

By men of all parties in Canada, the death of Lord Sydenham was viewed as a public calamity, and the press throughout the province bore testimony to the great value of his services. In the words of his able biographer, who rendered efficient assistance to the governor-general in his arduous duties:—"When we look back at the effects produced by his short but vigorous adminis-

tration, we need not be surprised at the unanimity which prevailed on this occasion. He had found the provinces staggering under the effects of two rebellions; their inhabitants divided against each other; their improvements arrested; their exchequers empty; their credit annihilated; each man mistrusting his neighbour; and all looking to military force as the only security against renewed violence and ultimate separation from the mother-country. In less than two years the picture was reversed. He left the province not only in the most complete security and repose; safe not only against foreign aggression, but against intestine discord; hope and confidence revived in every bosom; the public works again in progress; credit re-established; and the union with the mother-country cemented and placed on a broader and more secure basis.*

On the death of Lord Sydenham, Sir C. Bagot was appointed governor-general of Canada. He had been long employed in the diplomatic service, and having the character of being a high churchman and decided Tory, his accession to office was very favourably viewed by Canada; but they, nevertheless, complained that he threw himself into the hands of the Whigs and Radicals. Messrs. Draper and Ogden, Tory leaders, resigned; Messrs. Baldwin and Lafontaine, heads of the opposite party, were appointed attorneys-general for West and East Canada; and the council of eleven members was composed of moderate men of all shades of politics. It is, however, acknowledged, even by their opponents, that the new government and governor-general "adopted a system of managing the public revenues, calculated to cherish and improve the resources of the country; that its income increased under their direction; a more beneficial surveillance than had hitherto existed was imposed on the different public officers; and that the official duties of the departments were ably executed."—[*Colonial Magazine*, No. 33, September, 1846.] Severe illness obliged Sir Charles Bagot to resign office at the end of 1842, and he died in Canada on the 19th of May, 1843.

On the resignation of Sir Charles Bagot,

* T. C. Murdoch, Esq., then attached to Lord Sydenham as Civil Secretary, and now head of the Colonial Emigration Commission. Mr. Murdoch wrote that portion of the life of Lord Sydenham which related to Canada; the remainder was well executed by the brother of the deceased nobleman, G. Poulett Scrope, esq. M.P.

the premier, Sir Robert Peel, sought among the ablest men of the day for his successor, and Sir C. Metcalfe, though without aristocratic connections, and even personally unknown to any member of her majesty's ministers, was appointed governor-general of Canada.

Sir C. Metcalfe, born the 30th of January, 1785, was the second son of Sir Theophilus Metcalfe, M.P., whose family had been long connected with the East India Company. Mr. Metcalfe was educated at Eton, where he was "noted for his great kindness of disposition, and his remarkable aptitude at acquiring knowledge and mastering difficulties." In 1800 he proceeded to Bengal as a "writer," or civilian, in the service of the East India Company. His proficiency in the college of Fort William attracted the notice of the Marquess Wellesley, then governor-general of India, who, in order to train a class of civil servants adapted for the government of a great empire, formed what was termed the "Governor-General's Office," in which were placed the most promising young men in the service of the East India Company, where, under the eye of Lord Wellesley, they were trained and prepared for high positions.

In a letter written to the Marquess Wellesley in 1836, Sir Charles Metcalfe, gratefully attributes his success in life to the counsels of Lord Wellesley, and to his own endeavours to follow the example set by his lordship. Mr. Metcalfe first distinguished himself as resident at the court of Scindiah, one of the Mahratta chieftains, and at a critical period, when his very life was threatened, evinced the firmness which characterized his after life. During the Mahratta war of 1803 to 1805, Mr. Metcalfe was attached in a civil capacity to the army of Lord Lake, and his lordship having, in a moment of irritation, let fall some hasty expressions respecting "men who would not fight, and were in the way of others," the young civilian vindicated his personal courage by taking an active part in several contests, and particularly at the battle and siege of Deeg, where, carried away by enthusiasm, and armed only with a walking-stick, he headed an attacking party of the British troops in their assault on the city. In successive years Mr. Metcalfe passed through different grades of office, and was employed as resident, or representative of the British government at the courts of Scindiah, of the Great Mogul at Delhi, the

Nizam of the Deccan, and at Lahore, on a special mission to Runjeet Sing. He also filled the arduous office of chief secretary to government, and in 1827 became a member of the Supreme Council of Bengal, and retained his seat for seven years, two years beyond the usual period. In 1834 Sir Charles Metcalfe (who had succeeded to a baronetcy on the death of his father) was appointed lieutenant-governor of the Agra and the North-west provinces of India; and in the same year, on the retirement of Lord William Bentinck, he was named acting governor-general, the highest office which a civil servant of the East India Company can hold in Bengal; the crown having adopted the suggestion of Lord Wellesley, that the office of governor-general should not be held by any servant of the East India Company. As acting governor-general, Sir Charles Metcalfe granted a free press to British India, and adopted various liberal measures. In 1836 he was succeeded by Lord Auckland, who was appointed governor-general; and the court of directors of the East India Company having disapproved of Sir Charles Metcalfe's ordinance on the Indian press, he returned to England, and thus ended a useful career of 36 years' service in British India. In 1837 he was created a civil K.C.B. by His Majesty William IV., and retired, for a time, into private life. In July, 1839, Sir Charles Metcalfe was induced to quit his privacy, and undertake the office of captain-general or governor of Jamaica, which was strongly urged upon him, in consequence of the distracted state of affairs in that important colony. On his arrival at Jamaica the governor called the Assembly together, frankly solicited their confidence, which was readily granted; and by a strict enforcement of justice, tempered with mercy—by firmness attended with mildness—he succeeded in restoring peace to the colony. General ill health, and the appearance of a cancer on his face, compelled Sir Charles Metcalfe, to the great regret of all parties, to relinquish the government of Jamaica on the 20th of May, 1842; and on his arrival in July of the same year Sir Charles Brodie excised a cancerous tumour from his cheek, after which he partially recovered—accepted the station of governor-general of Canada, and proceeded immediately to Kingston, in Western Canada, where he was sworn into office.

The new governor-general stated that

while he recognized the just power and privileges of the people to influence their rulers, and to regulate, through their representatives, the measures of the government, he reserved to himself the right of selecting the executive officers of the crown. The members of the Canadian Parliament, and also of the executive, were divided on the subject of the transfer of the seat of government from Kingston, in Upper Canada, to Montreal in Lower Canada; and there was a great struggle for a parliamentary majority by Sir Allan Napier M'Nab and his party. Sir C. Metcalfe did not interfere in these discussions, and the Assembly eventually decided for the removal. In 1844 the queen, as a mark of her appreciation of the long and valuable services of this distinguished servant, created him Baron Metcalfe.

It is unnecessary to enter into details here, on subjects of merely local interest, which influenced the majorities in the Assembly and the persons entrusted with the executive government of the colony. No particular event took place, except two awfully destructive fires which occurred at Quebec. Happily few lives were lost; but it was calculated that the dwellings of 24,000 people had been destroyed, many of whose inhabitants were reduced to utter destitution. Subscriptions to the amount of £100,000 were collected in the United Kingdom, and £35,000 was elsewhere raised for the relief of the afflicted sufferers.

In 1844 the Canadian Parliament was dissolved, and a new one called, in which the views of the governor-general were supported by a small majority. The high character, indomitable energy, and singleness of purpose habitually evinced by the representative of the crown in Canada, enabled him to effect much good in training the people for the future enjoyment of free institutions; and had his life and powers been spared, he would doubtless have assuaged the asperity which the violence of party feeling had diffused over all classes in Canada. But in November, 1845, he was obliged to return to England, the cancer on his cheek having reappeared; and of this dreadful disease he soon after died, universally regretted. The kindness, the frank manliness, forbearance, and christian charity of Lord Metcalfe were as fully appreciated in Canada as they had been in Jamaica and in British India.

Lord Stanley in the Canadian debate in the House of Lords on 13th June, 1849, described him as "that wise, great, and good

man, of whose high qualities and transcendent merits it would be impossible to speak in terms of exaggerated praise." His lordship drew an eloquent, but most truthful picture, when he said—"He knew nothing more touching than the uniform patience and fortitude with which, in the agony of an incurable disease, in the presence of death in its most loathsome and appalling form, in the midst of the most violent party struggles, surrounded by the most distracting vexations, and the extremest agony of body and mind—nothing could be more touching than the self-possession, the calmness, and temper with which he restrained the violence which assailed the governor of Canada."

The then commander-in-chief in British North America, Lieutenant-general Earl Cathcart, was appointed administrator of the government. At this period the Earl of Elgin and Kincardine, then governor of Jamaica, was in England on leave of absence. Lord Elgin had succeeded Sir Charles Metcalfe in May, 1842, in the administration of the affairs of Jamaica, and his conduct had given universal satisfaction in the colony, to his sovereign, and to her majesty's government. His lordship had inherited and imbibed from his father a capacity for public life. The late Earl of Elgin had been chiefly employed in the diplomatic service, and during the eventful period at the close of the last, and the beginning of the present century, his exertions as his majesty's representative with the Sublime Porte, at Constantinople, were effectively instrumental in aiding the late Marquis Wellesley in the successful issue of his lordship's project for the expulsion of the French from Egypt by the combined armies from England and from India. Lord Elgin was, contrary to the law of nations, imprisoned by Napoleon for his exertions; which were never requited by the government of Britain. The sacrifice of the Athenian Marbles to the French emperor would have secured his freedom, but his lordship's patriotic spirit destined them for his own country, and would not abandon his object even for personal freedom or riches. The grant from the British parliament only repaid half his expenses in conveying them from the shores of Greece, to be cared for and appreciated in Britain; but his desire of raising the standard of taste among his countrymen was accomplished. The present peer was born in 1811, educated at Oxford, returned member for Southampton to the

Imperial Parliament, where he made an effective speech on the Address, which at once marked him as a statesman, and opened the door of office to him while in England. His accession to the earldom removed him from the House of Commons, and her majesty's government being anxious to nominate a successor to Sir Charles Metcalfe in the government of Jamaica, Lord Elgin accepted the appointment, which he fulfilled greatly to the satisfaction of his sovereign, and to the Whig as well as Conservative party. Earl Grey subsequently stated in the House of Lords, that Lord Elgin was nearly a stranger to him when he recommended his lordship to the queen for the government of Canada; and during the recent parliamentary discussions statesmen of all parties in both houses united in bearing testimony to the ability and integrity of the governor-general, the difficulties of whose position are, perhaps, even greater than those of his predecessors. Lord Lyndhurst, in the debate of 20th of June, 1848, while opposing the "Canada Indemnity Bill," said, "*I believe—and I state it on the testimony of many persons who have the best means of knowledge—Lord Elgin to be a most honest and conscientious as well as able man.*" The Earl of Elgin was appointed Governor-General of Canada 1st of October, 1846, and arrived in Canada in January, 1847.

The principal feature in the administration of the Earl of Elgin has been the passing of a bill by the legislature of Canada for the indemnification of parties in the Lower province, who had suffered by the rebellion of 1837–38. The bill has occasioned considerable excitement in Canada, and given rise to much discussion in the Imperial Parliament, and as the question raised in England, both in the House of Commons and the House of Lords, involves the free exercise of what is termed "responsible," or, more properly speaking, "constitutional" government in the colonies, it will be desirable to place on record a brief narrative of the principal circumstances connected with this measure, derived from the documents laid before Parliament.

On the 26th January, 1838, Earl Gosford, then governor-general, addressed a letter from Quebec to Lord Glenelg, then her majesty's Secretary of State for the Colonies, in which he informed her majesty's government that "many loyal individuals in Lower Canada had sustained losses to a greater or less extent, from the rebels having taken

possession of and laid waste their property, or from the same having been destroyed by the military operations necessary for putting down the insurrection;" and the governor-general inquired "whether any and what description of losses incurred from the above causes were to be indemnified, and in what manner." A committee of the Executive Council of Lower Canada, of Messrs. Stewart, Pemberton, Panet, and Guesnal, on 21st January, 1838, having deliberated on the subject, recommended "an advance, by way of loan, to any loyal subject who can show satisfactorily that the whole or greater part of his property has been destroyed, without any connivance or fault of the applicant, by the rebels or her majesty's forces, during the late insurrection, a sum not exceeding one-third of the estimated loss; the party giving good security for the repayment of the amount so advanced, without interest, in case of the government hereafter deciding that such losses are not to be indemnified by the public."

On the 26th April, 1838, an ordinance (1 Vic. c. 7) was passed by the Special Council of Lower Canada, under the administration of lieutenant-general Sir John Colborne, authorizing the appointment of commissioners "to investigate the claims of certain loyal inhabitants of the province for losses sustained during the late unnatural rebellion."

On the 6th March, 1838, an act (1 Vic. c. 13) was passed by the legislature of Upper Canada, authorizing the appointment of commissioners to make a diligent and impartial inquiry into the amount of losses sustained by "*certain inhabitants* of this province" during the late unnatural rebellion." The word "*loyal*" does not appear in this act. The commissioners were to inquire into all matters and things under oath, to punish false swearing, and to furnish to the lieutenant-general accounts of their proceedings in writing. The report of the commissioners in Upper Canada gives full details of the property destroyed by the rebels in Upper Canada, and also that destroyed by the American "sympathisers," or invaders.

On 11th May, 1838, the legislature of Upper Canada passed an act (c. 68), authorizing the issue of provincial debentures to the amount of about £5,000, bearing 6 per cent. interest, and redeemable after 20 years, to certain persons whose claims for losses during the insurrection in Upper Canada in December, 1837, had been investigated.

The House of Assembly also addressed the queen, praying the reimbursement of the money thus granted from the imperial treasury. The Marquis of Normanby, as her majesty's Secretary of State for the Colonies, on 27th June, 1839, informed Sir G. Arthur, lieutenant-governor of Upper Canada, that he was commanded by the queen to express to the Assembly her majesty's regret that she could not hold out any prospect of the indemnity-money being repaid by Parliament, the people of England being already charged with the military defence of the province.

In 1839, an act was passed by the legislature of Upper Canada to "ascertain and provide for the payment of *all just claims arising from the late rebellion* and invasion of the province." The preamble of this Act conveyed a pledge that the indemnity should ultimately be borne by the Imperial treasury.

Lord John Russell, as her majesty's Secretary of State for the Colonies, on 12th October, 1839, declined giving the assent of the crown, stating, that even if the principle of the preamble were admitted, it would be of no avail, unless with the previous sanction of Parliament. His lordship, however, informed Sir George Arthur, the lieutenant-governor, that if the colonial legislature should pass a similar bill, free from the objection of pledging Parliament for the payment of the indemnity-money, he would be ready to advise the giving of the royal assent.

In 1840 an act was passed by the United Legislature of Canada (8 Vic. c. 72), appropriating £40,000 "for the payment of *all just claims* arising from the late rebellion and invasion of the province." The money to be collected and levied from tavern licences and other duties in the province, and apportioned by three commissioners on oath. The royal assent was given to this act, and it was promulgated 22nd October, 1840. A further act was passed 28th July, 1847, adding £3,613 8s. 9d. to the £40,000 authorized by the 8 Vic. c. 72. Nothing was stated in the act relative to loyalty; the matters to be investigated involved solely the *justness*, or as Mr. Poulett Thomson expressed it, the *validity* of the claims.

Under this act it is stated by Mr. Hincks, the receiver-general of Canada, that many persons who were known to be rebels received payment for supplies rendered to the military, or for damage sustained.

During 1838, and in subsequent years,

the losses sustained in *Lower Canada* by the rebels and American invaders, was repeatedly under examination and discussion. Previous to the arrival of Mr. P. Thomson as governor-general, £21,000 had been awarded to the sufferers by Sir J. Colborne, and Mr. Thomson urged on her majesty's government that the Imperial Parliament should defray, at least, some of these claims.

In 1845 the council of Lord Metcalfe (then consisting of what is termed the conservative party in Canada) proposed that a special fund, derived from tavern and marriage licenses, which formed part of the revenue of the consolidated fund in Canada, and was more productive in Upper than Lower Canada, should be surrendered to the municipalities; and that in Upper Canada it should, in the first place, be charged with the payment of the rebellion indemnity losses. *Previous* to this proposal being carried in the Canadian Parliament, a resolution was unanimously adopted by the House of Assembly, praying his excellency "to cause proper measures to be adopted, in order to ensure to the inhabitants of *Lower Canada* indemnity for *just* losses by them sustained during the rebellion of 1837 and 1838."

The French party in the United Legislature assented to this act for indemnification in Upper Canada: a proposition was made, and confirmed by the above resolution, that a similar act should be passed for *Lower Canada*. On the 24th of November, 1845, Lord Metcalfe, the governor-general, issued a commission to Messrs. Dione, Moore, Jacques, Viger, Simpson, and Beaudry, to inquire into the losses sustained by her majesty's *loyal* subjects in *Lower Canada*. On the retirement of Lord Metcalfe the commission was renewed on the 12th of December, 1845, by the Earl of Cathcart, as administrator of the province, to the same persons; and the commissioners were instructed to "*classify carefully the cases of those who may have joined in the said rebellion, or who may have been aiding and abetting therein, from the cases of those who did not; stating particularly, but succinctly, the nature of the loss sustained in each case, its amount and character, and, as far as possible, its cause.*"

An investigation of this nature would, if efficiently performed, necessarily enable the government to ascertain what were "*just*" claims, without entering on the debateable ground of what constituted treason, or who

were traitors or rebels; but a difficulty arose in the minds of the commissioners as to their powers and means of procuring evidence, and on the 27th of February the government decided that the commissioners were to be "guided by the sentences of the courts of law," and that they had no powers to call for persons or papers.

On the 18th of April, 1846, the commissioners reported to Lord Cathcart, that they recognized claims to the number of 2,176, and of the value of £241,965, viz., personal property £111,127, real property £68,961, and damages not comprised in the foregoing heads £61,877. In the latter was included £9,000 for interest, £2,000 for quartering troops, £30,000 indemnity for imprisonment, interruption of business or trade, privation of goods destroyed or carried off, and banishment: the remainder represented various losses, such as account books, trade effects, &c. The commissioners were of opinion that £100,000 would be a sufficient and fair equivalent to the losses sustained; and they stated, that "the want of power to proceed to a strict and regular investigation of the losses in question, left them no other resource than to trust to the allegations of the claimants as to the amount and nature of their losses." Some of the claims the commissioners considered inadmissible, and others were evidently exorbitant.

On the 19th of June, 1846, the United Legislature passed "an act to provide for the payment of certain rebellion losses in *Lower Canada*." The act also empowered the issuing of £9,986 7s. 2d. in debentures towards the payment of the said indemnity.

On Lord Elgin's assumption of the government of Canada in January, 1847, he found the question in the state described. The Conservative administration by which he was surrounded, dissolved the House of Assembly in the hope of strengthening their position; but the new Assembly convened under their auspices, placed the administration in a minority, and compelled it to give place to what would be termed in England the Whig or Reform Party. By the constitution of Canada the governor-general is bound to act only through "responsible" advisers—that is, those who possess the confidence of the province; and the only legitimate proof of that confidence is a majority in the House of Assembly.

The Reform administration proceeded to carry out the measures adopted by their

predecessors in office for the indemnification of the rebellion losses; and, accordingly, on the 27th of February, 1849, an act was introduced, and read without opposition in the House of Assembly, "to provide for the indemnification of parties in Lower Canada, whose property was destroyed during the rebellion of 1837-38." The preamble recited the different steps that had been taken during preceding years, and authorised the issue of debentures to the amount of £100,000, for the payment of this indemnity. But as the commissioners of 1846 reported their inability to make a strict and regular investigation of the losses in question, the preamble declared—"it is necessary and just that the particulars of such losses, not yet paid and satisfied, should form the subject of more *minute inquiry under legislative authority*, and that the same, so far only as they may have arisen from the total or partial, unjust, unnecessary, or wanton destruction of the dwellings, buildings, property, and effects of the said inhabitants, and from the seizure, taking or carrying away of their property and effects, should be paid and satisfied; provided that *none of the persons who have been convicted of high treason*, alleged to have been committed in that part of this province formerly the province of Lower Canada, since the first day of November, 1837, or who, having been *charged with high treason or other offences of a treasonable nature*, and having been *committed to the custody of the sheriff in the gaol of Montreal, submitted themselves to the will and pleasure of her majesty*, and were thereupon transported to her majesty's Islands of Bermuda, shall be entitled to any indemnity for losses sustained during or after the said rebellion, or in consequence thereof."

This act, after much discussion, was passed by the House of Assembly and by the Legislative Council. It was opposed on the ground, that rebels *might* obtain compensation, which the administration repeatedly asserted was not the intention of the act; and no objection having been made by her majesty's government to the previous act for Upper Canada, or to any of the proceedings adopted by Lords Gosford, Sydenham, Metcalfe, and Cathcart, the governor-general deemed it his duty to give his assent. It was well known that much property had been wantonly destroyed in the Lower province, and a pledge had been given by the members of Upper Canada to

those of Lower Canada, previous to the passing of the indemnity bill for Upper Canada, that a similar act should be adopted for Lower Canada. The money was not to come out of the Imperial treasury, but to be raised by the people, whose representatives had, by a considerable majority (48 to 32) enacted the law, which was confirmed by the Legislative Council, consisting of 31 English and 15 French members nominated for life, and independent of the governor or of the people; and it was clearly the bounden duty of the representative of the crown in Canada to do that which his sovereign would necessarily have done in England, namely, assent to a measure passed by majorities in the House of Commons and in the House of Lords. Had Lord Elgin declined to take this course, he would have thrown the whole colony into irremediable confusion; the disastrous contest of races would have broken out afresh; the constitution granted by the Queen and Parliament of Great Britain would have been treated as a nullity; the declaration of our gracious sovereign, that it was the "anxious desire of her majesty that her British North American subjects should enjoy that freedom which is the birth-right of Britons," would have been set aside; and every other colony to which Great Britain might hereafter grant constitutional government, might justly doubt the permanence of a constitution whose first principles were liable to be abrogated or altered according to the fluctuating state of party feeling, either in the colony or at home.

To have dissolved the Canadian Parliament on the subject would have been unjust: when that parliament was convened the question was before the colony, and its principle ratified by the Upper Canada act; and to have reserved the act for the assent of the queen, would have thrown on the crown a degree of responsibility which its representative felt himself bound to incur. The governor-general, therefore, wisely, and in a spirit of justice, and also of conciliation, to all classes, gave his assent; but in consequence of the street riots in Montreal, promoted by the opponents of the act, and the disgraceful proceedings of the mob in burning the House of Parliament at Montreal, and thus destroying its magnificent library, Lord Elgin patriotically tendered his resignation of the arduous and responsible office, which he filled with dignified neutrality between violent contending par-

ties, and which, from the commencement of his administration, his lordship declared it had been his unremitting study to maintain. The queen and her majesty's government immediately expressed full approval of the whole conduct of the governor-general; urgently desired his retention of the office he had so meritoriously and judiciously filled; and the House of Commons and the House of Lords ratified the decision of her majesty's ministers. The approbation of the queen was thus strongly expressed by the Secretary of State for the Colonies, in the concluding paragraph of a despatch dated 18th of May, 1849:—"Relying, therefore, upon your devotion to the interests of Canada, I feel assured that you will not be induced by the unfortunate occurrences which have taken place, to retire from the high office which the queen has been pleased to entrust to you, and which, from the value she puts upon your past services, it is her majesty's anxious wish that you should retain." Sir Robert Peel most ably supported the policy pursued by Lord John Russell and Earl Grey. The House of Assembly in Canada voted an address to the

governor-general by a considerable majority, which was tantamount to an approval of his policy; and about forty addresses were presented to him from Montreal, Quebec, and various places in Upper and Lower Canada.

The violent language and proceedings of the minority have inflicted much injury on Canada; and the inflammatory articles printed in the *Montreal Gazette* of 25th April, 1849, and laid before the British Parliament in May, 1849, cannot be palliated.

Canada wants capital to cultivate its waste lands, to make railroads and canals, and to improve its valuable territory. Capital can only be attracted by peace, by order, by an union of all classes cordially combining for the welfare of their common country. May this recent agitation be the expiring contest of the opposing races in Canada; the colonists, whether of English or French descent, are now *all British subjects*, and have been so for nearly a century (90 years)—the queen and government of Great Britain acknowledge no distinction, and it is the interest, as it is the policy, of England that Canada should be peaceful, prosperous, united, and happy.

CHAPTER II.

TOPOGRAPHY, RIVERS, LAKES, TOWNSHIPS, CHIEF CITIES, ETC.

CANADA, under the dominion of France, was governed as one province, and after its conquest by the British, in 1760, was considered as such until 1791; when the colony was divided into two provinces by an order of the King in Council, viz.—the *Lower* or *Eastern*, in which the French population resided; and the *Upper* or *Western*, to which the refugee loyalists from the United States and emigrants from Britain chiefly resorted. After the rebellion of 1837, '38, '39, the two provinces were reunited, and on the passing of the Act of Union in 1840, and the consequent alterations in the new Legislative Assembly, the electoral divisions and boundaries of counties were altered. The existing arrangements will be shewn in the chapter on Population; in the present chapter the geographical features will be preserved as better calculated to afford a correct idea of the physical features of the country.

The whole province, exclusive of the adjacent regions claimed by the Hudson's Bay Company, may be said to extend in a S.W. direction from the island of Anticosti, in the Gulf of St. Lawrence, to the S. extremity of Lake Erie, a distance of 1000 miles. From Lake Erie to the N.W. boundary of the colony, in the parallel of 50° N., the distance, as the crow flies, is 600 miles, and from Quebec to the N.W. limits of Lake Superior, the distance is nearly 1000 miles. The largest portion of the province is situated between the parallels of 45° to 50° N.: but the fine districts between Lakes Ontario, Erie, and Huron, extend from 45° to 41° 30' N. in a S.W. direction for nearly 400 miles, with a breadth varying from 50 to 150 miles.

The coast of Labrador lies between the parallels of 50° and 60° N.; a rigorous climate and sterile soil have prevented its colo-

nization. The boundaries of the province on the N., N.E., and N.W., have not been clearly defined, and the area has been variously estimated; in Eastern or Lower Canada, exclusive of Labrador, the river and gulf of St. Lawrence, and the lakes, the area is about 210,000 square English miles. The gulf and river of St. Lawrence cover upwards of 50,000 square miles. The vast lakes and numerous rivers in Western or Upper Canada render it difficult to give approximate accuracy to the landed area.

The natural features of Canada partake of the most romantic sublimities and picturesque beauties; indeed the least imaginative beholder cannot fail to be struck with the alternations of ranges of mountains, magnificent rivers, immense lakes, boundless forests, extensive prairies, and foaming cataracts.

Beginning with the bold sea-coast of the ocean-like river St. Lawrence, it may be observed that the eastern parts are high, mountainous, and covered with forests on both sides of the St. Lawrence to its very edge; on the northern side the mountains run parallel with the river to Quebec, where they take a W. and S.W. course: on the southern side the mountainous range does not approach within 60 miles of Quebec, when it quits the parallel of the river and runs in a S.W. and S. direction into the United States. The mountains S. of the St. Lawrence rise abruptly at Percé, between the Bay of Chaleur and the Bay of Gaspé. They follow the course of the river at a greater distance from its banks than those on the opposite side, and are connected by the Green Mountains of Vermont with the loftier ridge of the Alleghanies, which divide the tributaries of the Atlantic from those of the Ohio. The country situated between the mountain ranges on either side of the river and the boundary line of East Canada in 45° north, forms the valley of the St. Lawrence. In order to give a clear view of this valley, it may be well to divide it into sections, and then treat briefly of the rivers and lakes throughout the province—beginning with the sea-coast.

I. NORTH SIDE OF THE ST. LAWRENCE.—The most northerly and easterly section of the province of Eastern Canada, extending from Ance au Sablon on the Labrador coast to the Saguenay river, lat. 48° 5', long. 69° 37', occupies a front of 650 miles, of which little more is known than the appearance of the coast, as noted from time to time by fisher-

men and hunters. Bold mountainous features generally characterise the coast line; in some places the range recedes from the shores of the gulf and river St. Lawrence to the extent of 12 or 15 miles, leaving a deep swampy flat or moss-bed nearly three feet in depth, while in others (as at Portneuf, 40 miles E. of the Saguenay) the shores are of moderate elevation, and composed alternately of cliffs of light-coloured sand, and tufts or clumps of evergreens.

The country between the two points above-stated, is well watered by numerous rivers, among which may be mentioned the Grande and Petite Bergeronnes, the Portneuf, Missisiquinak, Betsiamites, Bustard, Manicougan, Ichimanipistic (or seven islands), St. John, St. Austins, and Esquimaux.

II. The second geographical division of the province N. of the river St. Lawrence, is that comprised within the mouths of the Saguenay and St. Maurice rivers, which form the great highways to the northern territories, and ramify in various directions with numerous lesser streams and lakes. The distance between the Saguenay and the St. Maurice is about 200 miles. From Quebec to the Saguenay there is a lofty and clearly defined range of mountains; from Cape Tourment, the ridge is unbroken (save where rivers find their exits in the St. Lawrence) to 15 miles below Saguenay. Beyond this coast border, the country is in some places flat, in others undulated by chains of hills of moderate height, and well watered by numerous lakes and rivers; among the latter are the St. Charles, the Montmorenci, the Great River, or St. Ann's, the Riviere du Gouffre, Black River, &c.

The country N. W. of Quebec, between that city and the *St. Maurice*, is not so strongly marked as on the S. E. towards the Saguenay; the land gently ascends from the St. Lawrence banks, presenting an extremely picturesque prospect, the effect of the rich grouping of water, wood, and highly cultivated ground being heightened by the shadowy forms of remote and lofty mountains. The rivers Jacques Cartier, Portneuf, St. Ann's and Batiscan, with their numerous tributaries, tend also to fertilize and adorn this delightful district.

III. The third territorial section N. of St. Lawrence, embraces the country lying between the St. Maurice river and the junction of the Ottawa and St. Lawrence, where West and East Canada meet. The aspect

of the country from 5 to 15 miles from the river's bank is marked by slightly elevated table ridges, with occasional abrupt acclivities and plains of moderate extent.

The islands of Montreal, Jesus, and Perrot, situate in the river St. Lawrence, come within this section. Montreal, the largest of the three, is of a triangular shape, 32 miles long by 10 broad, lying at the confluence of the Ottawa and St. Lawrence, and separated on the N.W. from Isle Jesus, by the *rivière des Prairies*. Montreal exhibits a surface nearly level, with the exception of a mountain (Coteau St. Pierre) and one or two hills of slight elevation, from which flow numerous streams and rivulets. The island is richly cultivated and tastefully adorned. Isle Jesus, N.W. of Montreal, 21 miles long by 6 broad, is everywhere level, fertile, and admirably tilled; off its S.W. end is Isle Bizard, about 4 miles in length and nearly oval, well cleared and tenanted. Isle Perrot lies off the S.W. end of Montreal, 7 miles long by 3 broad; level, sandy, and not well cleared; the small islets de la Paix are annexed to the seigniory of Isle Perrot, and serve for pasturage.

Little is known of the interior of that portion of the province which is bounded by the Ottawa or Grand River; so far as it has been explored, it is not distinguished by the boldness which characterises the eastern section of Lower Canada; now and then small ridges and extensive plains are met with, receding from the bed of the Ottawa, whose margin is an alluvial flat, flooded often by the spring freshes and autumnal rains, to the extent of a mile from the river's bed. The Bytown tract, extending 200 miles up the Ottawa, to the Upper Allumettes lake is in general level or gently sloping, and is traversed by several tributaries of the Ottawa, towards which it gradually declines.

IV. SOUTH SIDE OF THE ST. LAWRENCE.—We now turn to the region on the south of the St. Lawrence, beginning as before at the sea coast—on which the extensive county and district of Gaspé is situate. This large tract of territory which extends 90 miles from north to south, and has a sea coast of 380 miles, with a range of mountains skirting the St. Lawrence to the N., and another at no remote distance from the shores of Ristigouche river and Bay of Chaleur;—between these ridges is an elevated and broken valley, occasionally intersected by deep ravines. The district is well wooded, and watered by numerous rivers and lakes; the

soil rich, and yielding abundant crops when tilled. The sea-beach is low (with the exception of the lofty and perpendicular cliffs of Cape Gaspé) and is frequently used as the highway of the territory; behind it, the land rises in high, round, and well wooded hills. The chief rivers are the Ristigouche, into which fall the Pscudy, Goummitz, Guadamonichou, Mistoue, and Matapediac; the Grand and Little Nouvelle, Grand and Little Cascapediac, Caplin, Bonaventure, East Nouvelle, and Port Daniel, which discharge themselves into the Bay of Chaleur;—Grand and Little Pabos, Grand and Little River, and Mal Bay River, flowing into the Gulf of St. Lawrence:—the river St. John, and north-east and south-west branches, fall into Gaspé Bay. There are also many lakes.

V. The country comprised between the W. boundary of Gaspé, and the E. of the Chaudière river, fronts the St. Lawrence river to the N.W. for 250 miles, and is bounded on the S.E. by the high lands dividing the British territories from those of the United States. These high lands are 62 miles from the St. Lawrence at their nearest point, but on approaching the Chaudière river, they diverge southwardly. The physical aspect of this district, is not so mountainous as the opposite bank of the St. Lawrence; it may more properly be characterised as a hilly region, abounding in extensive vallies. The immediate border of the St. Lawrence is flat, soon however rising in irregular ridges, and attaining considerable height, and forming an extent of table-land; which, at the distance of 15 to 20 miles from the shores of the St. Lawrence, gently descends towards the river St. John, beyond which it again reascends, acquiring a greater degree of altitude towards the sources of the Allegash, and finally merging in the Connecticut range of mountains.

VI. The last section of Lower Canada, S. of the St. Lawrence, is the exceedingly valuable tract W. of the river Chaudière fronting the St. Lawrence, and having in its rear the high lands of Connecticut, and the parallel of 45° of N. lat., which constitutes the S. and S.E. boundary of Eastern Canada, where the latter is divided from the American States of New Hampshire, Vermont, and New York. The physical aspect greatly varies throughout this extensive section; at the mouth of the Chaudière the banks of the St. Lawrence still retain the boldness for which they are remarkable at Quebec and Point Levi, but proceeding

westward, they gradually subside to a moderate elevation, till they sink into the flats of Baie du Febre, and form the marshy shore of Lake St. Peter, the remainder of the country being a richly luxuriant plain. Proceeding from Lake St. Peter towards Montreal, the majestic grandeur of the country about Quebec contrasts with the picturesque champagne beauties of Richelieu, Verchères, Chambly, and La Prairie districts. In the former especially, the eye of the spectator is delighted with a succession of fertile fields, luxuriant meadows, flourishing settlements, neat homesteads, gay villages, and even delightful villas, adorning the banks of the Richelieu, the Yamaska, and the St. Lawrence, whilst in the distance are seen the towering mountain tops of Rouville and Chambly, Rougemont, Mount Johnson, and Boucherville. As the country recedes from the St. Lawrence banks to the E. and S.E., it gradually swells into ridges, becomes progressively more hilly, and finally assumes a mountainous character towards lakes Memphramagog and St. Francis, beyond which it continues to preserve more or less a similar aspect, to the borders of the Chaudière, and the height of land at the Connecticut's sources. Colonel Bouchette, the surveyor-general of Lower Canada, to whose valuable observations I am so much indebted in this volume, is of opinion that the range of hills traversing Bolton, Orford, &c., are a continuation of the Green Mountains, which form a conspicuous ridge running from S. to W. through the State of Vermont. Mr. W. E. Logan, the provincial geologist, says, "that between Montreal and Quebec the valley of the St. Lawrence has a general N.E. course, and presents a flat surface on each bank of the river. This plain extends from 12 to 20 miles in breadth on the N.W. side of the river, to the flank of a wide-spread, hilly, but not very elevated country. On the S.E. side of the river the plains are 30 to 40 miles wide, and with the intervention of a few moderate undulations, reach the foot of a range called the Green Mountains of Vermont, which, after entering Canada, decline in height; but a few isolated peaks are 4000 feet above the sea. A continuous mountain-belt bounds the S.E. side, presenting a gently undulating surface. These ranges of mountain and valley are parallel to one another, and to the St. Lawrence." Several isolated mountains rise from the valleys or plains of Yamaska and Chambly, and give a romantic interest to

the scenery, the beauty of which is increased by numerous rivers, lakes, and rivulets winding in every direction. The chief rivers are the Chaudière, which forms the eastern boundary, the Beçancour, Nicolet (two branches), St. Francis, Yamaska, Richelieu (or Chambly), Chateauguay and Salmon: all but the three last having their source within the province. The chief lakes are the Memphramagog, of which part belongs to Canada, and part to the United States; Scaswanipus, Tomefobi, St. Francis, Nicolet, Pitt, William, Trout, and many others of less importance.

Dr. Thomas Rolfe, who has laboured strenuously in behalf of Canada, remarks, that "from 100 miles below Quebec to 100 miles above Montreal, on both sides of the St. Lawrence, there is a most beautiful country, not only cleared, cultivated, and thickly settled, but actually adorned with a continuous line of villages on either bank. There is not a point from which the spire of a spacious and elegant parish church does not greet the eye, and frequently there are many to be seen in the same view. The eastern portion of Canada, and probably the eastern townships, contain the greatest variety of beautiful scenery; mountain, rock, hill, dale, plain, forest, water-fall, lake, and river."

Having thus briefly shown the geographical divisions of East Canada, we may proceed to the examination of the great artery which passes through both divisions of the province, and the islands and districts adjacent, beginning with the

GULF OF ST. LAWRENCE, which receives the waters of the numerous lakes and rivers of the Canadian portion of the American continent, and is formed by the western coast of Newfoundland, the eastern shores of Labrador, the eastern extremity of the province of New Brunswick, part of Nova Scotia, and the island of Cape Breton; and communicates with the Atlantic by three different channels; namely, by the Gut of Canso (a narrow passage dividing Cape Breton from Nova Scotia), by a considerably wider channel between Cape North, in Cape Breton isle, and Cape Ray, in Newfoundland; and by the narrow straits of Belle-isle, which separate the coast of Labrador from Newfoundland. The distance from Cape Rosier, Gaspé Bay, lat. $48^{\circ} 50' 41''$, long. $64^{\circ} 15' 24''$, to Cape Ray, in Newfoundland, lat. $47^{\circ} 36' 49''$, long. $59^{\circ} 21'$, is 79 leagues; and from Nova Scotia to Labrador the dis-

tance is 106 leagues. There are several islands in the Gulf—the one most dangerous to navigators, from its position, the steepness of its shores, and the dense fogs frequent on this coast, is in the principal entrance, between Newfoundland and Cape Breton, in lat. $47^{\circ} 12' 38''$, long. $60^{\circ} 11' 24''$, compass variation, $23^{\circ} 45'$ W. The isle is named St. Paul's, and is small and barren. On the S. side of the bay is Prince Edward's or St. John's island, which extends in a crescent-like form 123 miles, but is at its narrowest part only 12 miles across. To the northward are the small Magdalen islands, 11 in number, between the parallels of $47^{\circ} 50'$ and $47^{\circ} 38'$ N. lat., and $61^{\circ} 27'$ and 62° W. long., which were granted to Sir Isaac Coffin as a reward for his naval services. Five or six of them are inhabited by French Canadian, and English and Irish settlers, altogether numbering 1000, who carry on a profitable fishery. Magdalen isle, the largest, is 17 leagues in length, but very narrow, being in some places not more than a mile wide. North of the Magdalens is Brion's island, and beyond this are the Bird isles or rocks; the most northerly portion being in lat. $47^{\circ} 50' 28''$, long. $61^{\circ} 12' 53''$.

The river St. Lawrence, from the magnificent basin of Lake Superior in East Canada, has a course to the sea of nearly 3,000 miles, and a varying breadth of from 1 to 90 miles. Including the lakes Ontario, Erie, and Huron, through which it passes, it is navigable for ships of a large class very nearly 2,000 miles, and the remainder of its course for barges, batteaux, and vessels drawing little water, of from 10 to 15 and even 60 tons burthen. The remotest spring of the St. Lawrence, if we consider the Canadian lakes as merely extensive widenings of it, is the stream called St. Lewis in lat $48^{\circ} 30'$ N., long. about 93° W., from which its general direction through lakes Superior and Huron is S.E. to Lake Erie—nearly due E. from that lake, and then N.E. to the Gulf of St. Lawrence. It receives in its majestic course most of the rivers that have their sources in the extensive range of mountains called the Land's Height; and also those intersecting the ridge which commences on its south bank, and runs nearly south-west to Lake Champlain. From the sea to Montreal, this superb river is called the St. Lawrence, from thence to Kingston in Upper Canada, the Cataraqui or Iroquois; between Lakes Ontario and Erie, the Niagara; between lakes Erie and

St. Clair the Detroit; between lakes St. Clair and Huron the St. Clair; and between lakes Huron and Superior the distance is called the Narrows, or Falls of St. Mary. The St. Lawrence discharges into the ocean annually about 4,277,880 million of tons of fresh water, of which 2,112,120 million of tons may be reckoned melted snow; the quantity discharged before the thaw comes on, being 4,512 million of tons per day for 240 days, and the quantity after the thaw begins, being 25,560 million per day for 125 days, the depths and velocity when in and out of flood duly considered: hence a ton of water being nearly equal to 55 cubic yards of pure snow, the St. Lawrence frees a country of more than 2,000 miles square, covered to the depth of three feet. According to Mr. M^r Taggart, the solid contents in cubic feet of the St. Lawrence, embracing lakes Superior, Huron, Michigan, Erie, and Ontario, is estimated at 1,547,792,360,000 cubic feet, and the superficial area being 72,930 square miles, the water therein would form a cubic column of nearly 22 miles on each side! The embouche of this noble river is in that part of the Gulf of St. Lawrence where the island of Anticosti divides the mouth of the river into two branches.

This island, 130 miles long and 30 broad, has neither bay nor harbour capable of affording efficient shelter for shipping in bad weather. The aspect is generally low, but on the north of the island the shore is more elevated, and three lofty mountain peaks, with high table land, relieve the monotonous appearance of so large an extent of flat country. The rivers are of no great magnitude, and too little is known of the soil and nature of the interior to permit a decided opinion being formed on its quality; from the position of the island it may be supposed to be alluvial: it is as yet uninhabited, but as land becomes more valuable, will doubtless be colonized.

In 1828 the crew of the *Granicus* were shipwrecked on this island, and unable to obtain any sustenance on its uncultivated shores, they were driven by the fearful cravings of hunger to cannibalism, and the last wretched being is supposed to have perished for want of any more of his unfortunate companions to prey on. The bones and mangled remains of the slain, were found scattered about on the wild coast of Anticosti, as if a struggle had taken place in the last extremity.

Two light-houses have been erected on the island, one at the east point, the other at the south-west. The ship-channel between Anticosti and the main land of East Canada is about 40 miles broad.

On passing this island, the river St. Lawrence expands to a breadth of 90 miles; and in mid-channel both coasts are visible, the mountains on the north shore having their snow cap crests elevated to a vast height, and appearing more continuous in their outline than the Pyrenean range.

At the Bay of Seven Islands, which derives its name from the high and rugged islands which lie at its entrance, the St. Lawrence is 70 miles broad. There is deep water close to the islands, which appear to rise abruptly out of the sea; the centre of the bay forms a large basin, with a depth of from 10 to 50 fathoms; at its head, the land appears to sink low in the horizon, while that on each side is high and rugged.

From Seven Islands Bay to Pointe aux Pères, there is little to attract attention, except two very extraordinary mountains, close to each other, called the Paps of Matane, nearly opposite to which is the bold and lofty promontory of Mont Pelée, where the river is little more than 25 miles wide. After passing Isle St. Barnabé, the voyager arrives at Bic island (153 miles from Quebec), which is three miles in length, and nearly one in breadth. Good anchorage is found here. The adjoining seigniory of Bic on the main land is mountainous, and very uneven.

Proceeding onwards, several beautiful groups of islands are passed in succession, viz., Green island, Red island, Hare island, Kamouraska island, the Pilgrims, Brandy Pots, and a variety of others, all wooded, and some of them inhabited and cultivated. The Brandy Pots cluster is about 103 miles from Quebec. Opposite Green island, on the north shore, is the mouth of the Saguenay river. The St. Lawrence is here 20 miles wide, with an average depth of 12 fathoms; and the village of Kamouraska in the county and seigniory of the same name, is a favourite watering place of the Canadians. The mountains on both sides are very lofty, often terminating in capes or bold headlands, and producing an imposing effect; in general, and especially on the south side, a low, level, and cultivated tract of land, of various breadth, intervenes between the river and the mountain range, and the delicious verdure of its corn fields contrasts

finely with the sombre hue of the pine forests in the elevated and over-shadowing back ground. The cultivated Isle aux Coudres next meets the eye, and is followed by a delightful prospect of the settlement of the Bay of St. Paul, enclosed within an amphitheatre of high hills.

The Isle aux Coudres is 5 miles in length and 15 in circumference, and is distant about 2 miles from the north shore of the St. Lawrence river, and nearly opposite the Bay of St. Paul: compared with the neighbouring land it is low, but becomes more elevated towards the centre. The shore in a few places rises abruptly from the water, and is thickly covered with shrubs and creeping plants; in general, however, it is of easy ascent, and rendered picturesque by the numerous farms on it. The island was granted in 1687 to the ecclesiastics of the seminary of Quebec, to whom it still belongs. Although the breadth of the river is 13 miles, the navigation here becomes difficult, owing to the narrowness of the main ship-channel called the Traverse, which is contracted to 1,320 yards, by the Isle aux Coudres, the shoal of St. Roch, and English bank. There are two other channels, but the rapidity of the current is much greater in them than in the Traverse, and the holding-ground bad; notwithstanding, with a good pilot and a favourable wind, there is little or no risk. Where the river du Sud forms a large basin, and disembogues into the St. Lawrence, the latter is 11 miles in breadth, and the country assumes a charming aspect; the succession of villages, churches, telegraph stations, and farm-houses, all painted white, produce a dazzling contrast to the dark woods which clothe the rising grounds in the distance to their very summits, and present a landscape of varied beauty. Before arriving at the island of Orleans (four miles north-east of Quebec), Goose and Crane islands, and many smaller ones (almost all inhabited), are passed. Orleans, or Isle St. Laurent, 19 miles long, five and a half broad, and comprising an area of about 69 square miles, divides the river into two channels. The shores decline gradually to the beach, but the land rises considerably towards the western extremity of the isle, which is richly tilled by a population numbering 5,000, who derive much advantage from the sale of their horticultural and agricultural products in the neighbouring markets of Quebec. The south channel is always used by ships; the main-

land opposite is lofty, and in some places mountainous, but so well cultivated that a large tract in the vicinity of the Sud, which flows through a picturesque, extensive, fertile, and thickly settled country, has long been familiarly called the granary of the province.

The country below and above Quebec for some distance presents scenery whose beauty is unequalled in America, and probably in the world. From the eminence over which the post-road passes, or in sailing up the St. Lawrence, there are frequent prospects of immense extent and variety, consisting of lofty mountains, wide valleys, bold headlands, luxuriant forests, cultivated fields, pretty villages and settlements, some of them stretching up along the mountains:—fertile islands, with neat white cottages, rich pastures and well-tended flocks;—rocky islets, and tributary rivers, some rolling over precipices, and one of them, the Saguenay, like an inland mountain-lake, bursting through a perpendicular chasm in the granitic chain; while on the bosom of the St. Lawrence, with a breadth varying from 10 to 20 miles, ships, brigs, and schooners, either under sail or at anchor, with innumerable pilot-boats and river craft, in active motion, charm the eye of the immigrant or traveller.

The scenery, on approaching Quebec, is truly magnificent; on the left, point Levi, with its romantic church and cottages; on the right, the western part of Orleans isle, which closely resembles our own sweet Devonshire coast; beyond, the lofty mainland opens to view, and the spectator's attention is riveted by the magnificent falls of Montmorenci, a river as large as the Thames at Richmond, which precipitates its vast volume of constantly flowing waters over a perpendicular precipice 240 feet in height: the eye then runs along miles of richly cultivated country, terminating in a ridge of mountains, with the city and battlements of Quebec, rising in the form of an amphitheatre, cresting, as it were, the ridge of Cape Diamond, and majestically towering above the surrounding country, as if destined to be the capital of an empire.

Etymologists have exercised their ingenuity in tracing the origin of the word Quebec: some suppose it an Indian word signifying a strait: others are of opinion that it arose from the Normans exclaiming when they first beheld the lofty promontory—"Quel-Bec!"—It is even said that the

city owes its name to a place on the Seine, called *Caudebec*,—but Hawkins in his "Picture of Quebec," states the word to be of Norman origin, and gives an engraving of a seal belonging to William de la Pole, Earl of Suffolk, dated in the reign of Henry V., A.D. 1420. The legend or motto runs thus: "*Sigillum Willielmi de la Pole, Comitis Suffolchie, Domini de Hamburg et de Quebec.*" Suffolk was impeached by the Commons of England in 1450, and one of the charges against him was his unbounded influence in Normandy, where he lived and ruled like an independent prince; it is not therefore improbable that he enjoyed the French title of Count of Quebec in addition to his English honours.

Quebec Citadel is situated upon the N.E. extremity of a rocky ridge or promontory, called Cape Diamond, 350 feet above the St. Lawrence. The cape extends into the St. Lawrence towards point Levi on the opposite or right bank of the river, which is at this spot less than a mile in width.

The citadel (see Map, East Canada) is built on the peak of the promontory. About 40 acres are covered with the works, which are carried to the edge of the precipice. About 100 feet below the cliff on which the citadel is built is the elevated plain on which the city of Quebec stands, and this within a circuit of 3 miles is enclosed with strong fortifications connected with the commanding citadel. From the city there is a rapid descent of 200 feet to the river St. Lawrence, and within the narrow limits of the base of this precipice and the river, the lower town of Quebec is situated, opposite and contiguous to the shipping, where the merchants and traders carry on their useful pursuits. The N. side of the promontory has apparently been chosen as the site of the town, from its slope being more gradual than that on the southward, which is precipitous. To the N. the ground declines gently until within 100 feet of the St. Charles valley, when it becomes precipitous. The St. Lawrence flows to the southward of the city, where it is only 1314 yards wide, washes the base of the steep promontory of Cape Diamond, and receives the waters of the small river St. Charles, which flows to the N. of the city, their junction being in front of the town, where they expand into a considerable basin of $3\frac{1}{4}$ miles long, with a depth of 18 to 28 fathoms, forming the harbour of Quebec. The distance from one river to another across the ridge is rather more than

a mile. On sailing up the river, nothing of the city is seen until the spectator is nearly in a line between the W. point of Orleans isle and Point Levi, when there suddenly bursts upon the view an abrupt promontory 350 feet high, crowned with an impregnable citadel (the Gibraltar of the New World), surrounded by strong battlements, on which the British banners proudly wave; cathedrals and churches, warehouses, a fleet of ships at Wolf's Cove, and others at the wharfs; steamers plying in every direction; boats of every shape; ships on the stocks, or launching; the waters of the majestic cataract of Montmorenci rushing into the St. Lawrence over the projecting ledge; the churches, houses, fields, and woods of Beauport and Charlesbourg, with mountains in the distance; the high grounds, spire, &c. of St. Joseph; some Indian wigwams and canoes near Point Levi, and vast rafts or masses of timber descending the noble river from the forests on the Ottawa.

The city, as before observed, is nominally divided into two parts, called the Upper and Lower towns; the latter being built at the base of the promontory, level with high water, where the rock has been removed to make room for the houses, which are generally constructed in the old style, of stone, two or three stories high. The streets are narrow and ill ventilated. From the Lower to the Upper town there is a winding street (Mountain-street), extremely steep, which is commanded by judiciously planted cannon, and terminates at an elevation of 200 feet above the river, at the city walls, or "Break Neck Stairs," where the Upper town commences, extending its limits considerably to the westward, along the slope of the ridge, and up the promontory towards the Cape, to within 50 or 60 yards of its summit. The aspect is N., and it is on the whole well ventilated, although the streets are narrow and irregular. There are suburbs to each town; those of the Upper extend along the slope of the ridge called St. John's; those of the Lower, extend from the St. Charles along the valley called the "Rocks." The influence of the tides, which extend several leagues beyond Quebec, raises the waters at the confluence of the two rivers many feet above their ordinary level, and overflows the St. Charles valley, which rises gradually from the river to the northward, in a gentle slope for a few miles, until it reaches the mountains. This valley and slope is wholly under cultivation, and extremely rich and

picturesque. The ridge on which Quebec stands is also cultivated to the westward as far as Cape Rouge. A range of mountains to the northward, limits the extension of cultivation in that direction.

In 1662 Quebec did not contain more than 50 inhabitants; in 1759 the population was estimated at between 8 and 9000; in 1825 and 1831 the census gave as follows:—

	1825.		1831.	1848.
	Houses.	Pop.	Pop.	Pop.*
Quebec:—				
Upper Town .	480	4,163	4,498	No census.
Lower Town .	549	3,935	4,933	
Suburbs of—				
St. Roch . .	1,128	6,273	7,983	
St. John . .	843	6,025	6,918	
St. Lewis . .	120		1,583	
Total, exclusive of the Banlieue of St. John and St. Lewis . .	3,120	20,396	25,916	

As a fortress Quebec may be ranked in the first class; the citadel on the highest point of Cape Diamond, is defended by a formidable combination of strongly constructed works; small batteries connected by ramparts, are continued from the edge of the precipice, to the gateway leading to the Lower town, which is commanded by cannon of a large calibre, and the approach to which, up Mountain-street, is enfiladed and flanked by large guns: a line of defence connects with the grand battery a redoubt of great strength, armed with 24 pounders, entirely overlooking the basin and passage of the river. Other lines add to the impregnability of Quebec, which, well garrisoned, secure to us the navigation of the St. Lawrence. There are five strong gates in the walls which surround the city: the entrance from the Lower town is by Prescott-gate. That portion of the promontory which declines in height by successive ridges towards the interior, is fortified by a series of regular works, viz.: a moat, covered way, and glacis, with exterior defences to obstruct an enemy. The face of the city towards the river is so steep, that excepting the passage by Mountain-street, it requires only a wall for its protection. Four Martello towers on the heights of Abraham, in front of the fortifications range the whole plain to the west-

* The population is now about 40,000.

ward. The armoury of Quebec is superior to that of most of the European capitals; it contains equipments for 25,000 men, which can be furnished at a few hours' notice.

On the W. and in front of the citadel, are the celebrated plains of Abraham, on which Wolfe and Montcalm fought and perished, and to whose glorious memory the gallant Earl of Dalhousie has erected an obelisk with the following appropriate inscription:—*'Mortem virtus communem famam historia monumentum posteritas dedit. Hanc columnam in virorum illustrium memoriam WOLFE et MONTCALM, P.C. Georgius, Comes de Dalhousie in Septentrionalis Americæ partibus ad Britannos, pertinentibus summum rerum administrans; opus per multos annos prætermissum, quid duci egregio convenientius? Auctoritate promovens, exemplo stimulans, munificentia fovens. A.S. MDCCCXXVII.—Georgio IV. Britanniarum Rege.'* Lord Aylmer, in 1834, erected a small column with the inscription,—*"Here died Wolfe in the arms of victory."* And Sir Benjamin D'Urban, another brave soldier, in conjunction with the troops under his command in Canada, in 1848 raised a monument in memory of Wolfe on the plains of Abraham, consisting of a column 40 feet high, surmounted by a helmet enriched with laurel and a sword; after the design of a distinguished soldier and intelligent traveller, Sir James Alexander.

A great number of elegant and commodious public buildings adorn Quebec—such as the Hotel Dieu, the Ursuline Convent, the Jesuit's Monastery (now a barracks), the Protestant and Catholic Cathedrals, the Scotch Church, Lower Town Church, Trinity and Wesleyan Chapels, Exchange, Bank, Court House, Hospitals, Barracks, Gaol, Seminary, &c. The Roman Catholic cathedral is 216 feet long by 180 broad, and is capable of containing a congregation of 4000 people. It has a lofty dome, which produces an imposing effect. The religious services are performed with much ceremony; the bishop and 50 priests sometimes officiating. The Protestant cathedral, 136 feet long by 75 broad, is built in a plain style, and from its pure and simple taste, and neat spire, is much admired. The Scotch church is of less magnitude. Of three nunneries at Quebec, two have hospitals attached, in which great relief is administered to the poor. The *Hotel-Dieu*, founded in 1637 by the Duchess d'Aiguillon, includes a convent, church, cemetery, gardens, and an excellent hospital,

where the prioress and 32 nuns are continually employed in ministering to the sick. The Ursuline convent, founded in 1639, by Madame de la Peltrie, is in the centre of the city, surrounded by five gardens. The nuns, 46 in number, maintain a strict seclusion, but educate many of their own sex. The embroidery, especially for sacerdotal robes, &c., is highly celebrated.

The grand parade in front of the castle, surrounded by the principal edifices; the esplanade along the exterior wall, where the troops are reviewed; the market-place, 250 feet long by 150 broad; and the noble aspect of many of the buildings, both public and private, give an animated appearance to the city.

On the 28th May, and on the 28th June, 1845, two great fires occurred, which destroyed much of the Lower town, and the dwellings of 20,000 of its inhabitants. The conflagration destroyed part of St. Vallier, all St. John suburbs, part of St. Lewis, nearly all St. Roche, and the west part of the Lower town gate. Many of the houses were built with wood after the French fashion. The first fire extended a mile through a densely peopled suburb before it could be checked.

The town in general is pretty much like an English or rather a French city, except that the houses are mostly roofed with shingles (small pieces of thin wood); many of the best houses, public buildings, and great warehouses, are, however, covered with tin or iron plates, which, owing to the dryness of the climate, retain their brightness for many years. There are several distilleries, breweries, tobacco, soap, candle, and other manufactories; and every description of tradesmen may be found in the Upper and Lower town. Many of the shops, or as they are called in America, stores, are fitted out with taste, and in most of them every variety of goods, from a needle to an anchor, or a ribbon to a cable, is to be found. A steam-ferry plies constantly between Quebec and the opposite shore at Point Levi. In severe winters this channel is completely frozen over, and a line of road is marked with beacons, by which provisions, hay, wood, &c., are conveyed to the metropolis.

Many ships are built at Quebec. On the W. point of Orleans were built the *Columbus* and the *Baron of Renfrew*, those vast leviathans of the deep which human ingenuity contrived to float on its bosom. These ocean castles were strongly framed, timbered and planked as lesser sized vessels, and not

put together like rafts as generally supposed. The length of the *Columbus* on deck was 320 feet, breadth 50, extreme depth 40 feet, and she had four gigantic masts, with every appurtenance in proportion; 3000 tons weight were put on board of her before launching. It may be remembered that she reached England safely, and was water-logged on her return to Canada; the equally huge *Baron of Renfrew* reached the Thames, and was wrecked off Gravelines.

Proceeding onwards the St. Lawrence again widens after passing Quebec, while the banks, gradually losing the elevation observable at Cape Diamond, become sloping, and delightfully varied with groves, churches, white cottages, orchards, and corn fields, until arriving at Richelieu Rapid, 45 miles above Quebec; thence to Three Rivers (52 miles), there is little change in the general aspect of the banks of the St. Lawrence, the high lands receding to the N. and S. with a low but cultivated country. About 6 miles above Three Rivers, the St. Lawrence expands itself over a level country, and forms Lake St. Peter, which is about 20 miles in length, by 15 in breadth, but very shallow. At the head of the delta of the lake, the St. Lawrence receives the comparatively small but beautiful river Richelieu; in some places called Chambly—at others, Sorel. To Montreal (90 miles from Three Rivers) the scenery is varied rather by the hand of man than by nature, with the exception of numerous alluvial and richly tilled islets; many parts are picturesque and highly cultivated, there being a succession of parishes mostly consecrated to the memory of some saint, and so thickly peopled as to appear one continued village; the N. shore, through which the post-road passes, is the most populous.

Montreal, formerly the Indian village of Hochelaga, now the capital of the province of Canada, in 45° 31' N. lat., is situate upon the N. or left bank of the St. Lawrence, at the head of the ship navigation of the river, about 600 miles from the sea, and upon the southernmost point of an island bearing the same name, which is formed by the river St. Lawrence on the S., and by a branch of the Ottawa, or Grand River, on the N. The island is 32 miles long, by 10 to 12 broad: its surface is an almost uniform flat, with the exception of an isolated hill or mountain on its W. extremity, which rises from 500 to 600 feet higher than the river level. Along its base, and particularly up its sides,

are thickly interspersed corn fields, orchards, and villas, above which, to the very summit of the mountain, trees grow in luxuriant variety. The prospect from its summit, though wanting the sublime grandeur of the view from Cape Diamond at Quebec, is exceedingly picturesque: on the south, the blue hills of Vermont, and all around a vast extent of thickly inhabited, richly cultivated and fertile country, embellished with woods, waters, churches, cottages, and farms—below it the placid city of Montreal—its shipping and river craft, and the fortified island of St. Helena, altogether producing a scene of soft and singular beauty. In 1640, the spot on which the city stands contained an Indian village, in which the French formed a missionary station. Within a mile to the N.W. of the town the range of the mountain gradually declines for a few miles to the W. and N., to the level of the surrounding country. The bank of the river upon which Montreal is built, has a gradual elevation of from 20 to 30 feet, but declines in the rear of the town, where there is a canal to carry off any accumulation of water: the land then again rises towards the N. to a higher ridge. The wharfs are said to be better than any other similar structures in America, and consist of a range of massive masonry more than a mile in extent. The harbour adds greatly to the beauty of the city, and from the "Forwarding Houses" on the La Chine canal, to the foot of the current of St. Mary, a distance of 2 miles, the river St. Lawrence is covered with ships, steamers, barges, and boats of every description, during the time the navigation is open. Extensive basins are being constructed along the enlarged La Chine canal, to afford the means of steam-boat communication with the great lakes; and a channel is being deepened in Lake St. Peter, to render it navigable for vessels of a large draught of water. By means of steam-tugs from Quebec to Montreal, 180 miles distance, the Canadian metropolis will probably become one of the most important seaports in America. The city, comprised within the Upper and Lower town, is divided into wards, and in 1844 the number of inhabitants in each ward was:—St. Mary, 12,285; St. Lawrence, 12,235; Queen's, 13,571; West, 2,285; East, 1,912; Central, 1,805. Total, Males, 20,404; Females, 23,191, in 6,252 houses. Of these 19,041 were French Canadians; 8,863 British ditto; English, 3,161; Scotch, 2,712; Irish, 9,595; United States, 701:

from other places, 212. In 1844 there belonged to the Church of Rome, 29,280 citizens; 6,706 to the Church of England, 4,349 to the Church of Scotland; and 4,255 of other and various denominations. The far largest portion of the capital and enterprise of Montreal belongs to the inhabitants of British origin. The good taste, liberality, and zealous endeavours of the Hon. James M'Gill contributed greatly to the adornment of this handsome and prosperous city. The Hôtel-Dieu, a conventual structure, and the Montreal General Hospital, built in 1822, by voluntary subscription, at a cost of £6,000, are excellent charities. The St. Sulpician Seminary is a large building, occupying three sides of a square adjoining the cathedral. In this institution, and in the M'Gill College, all branches of learning are taught at moderate charges. The large nunnery of Nôtre-Dame has a superior and 60 sisters, who receive boarders at a small charge, and prepare teachers, whom they send to different districts. Another large nunnery, called the Sœurs-Gris (Grey Sisters), consists of a superior and 24 nuns, who admit into their spacious and charitable mansion the infirm poor, where, in a christian spirit, they administer spiritual consolation, food, and medicine. There are several handsome English and Scotch churches. The English Episcopal church is a fine building with a lofty spire. Whole streets of private buildings, many of them outside the city (whose entrenchments have been levelled some years since), have been recently constructed. Various public structures belonging to banks and corporate institutions adorn the capital. During the riots of 1849, on the passing of the Rebellion Losses Indemnity Bill, the building in which the Canadian Parliament met was burnt by the mob, and the library of the Legislature, one of the most valuable in British America, was destroyed. The city and private houses are lit by a gas company, and the corporation possess extensive water-works. The Harbour Commissioners have expended upwards of £100,000 on the improvement of the harbour, which affords a revenue of more than £10,000 a-year. The three principal streets are parallel with the river, and intersect each other at right angles; the houses are for the most part of a greyish stone, covered with sheet iron or tin: many of them are handsome structures. Among the principal edifices are the Hôtel-Dieu, the Convent of Notre Dame, the General

Hospital, the New College, Hôpital Général des Sœurs Gris, the French Cathedral, English and Scotch churches, Court House, Government House, Nelson's Monument, Barracks, Gaol, &c., &c. The Roman Catholic cathedral is the most splendid temple of worship in the New World, and its exterior grandeur is scarcely surpassed in the Old. It was commenced in 1824, finished in 1829, and dedicated to the Virgin Mary. In length it is 255 feet, in breadth 134, and the height of the walls, which are faced with cut stone, is 112 feet. The architecture is of the rich Gothic of the thirteenth century. It has six massive towers, between which is a promenade along the covered roof 25 feet wide, elevated 112 feet. There are 7 chapels and altars, and 9 spacious aisles: the high altar resembling that of St. Peter's at Rome—the pulpit that of Strasburg cathedral. The E. window behind the grand altar is 70 feet high by 33 feet broad; the other windows 36 feet by 10. It is surrounded by a fine terrace, and its chime of bells, clocks, altars, &c., correspond with the magnificent exterior. This magnificent structure contains 1244 pews, and will accommodate 12,000 persons, who may disperse in 6 minutes by 5 public and 3 private entrances. There are various public institutions in Montreal, which indicate the advanced state of the colony. The University College has Professors of Divinity, Classics, Mathematics, Natural Philosophy, Medicine, Surgery, Midwifery, Anatomy, Materia Medica. There is a College of Medicine for instruction in all branches of the healing art. Among the other institutions are the High School of Montreal, Baptist College, Congregational Theological Institute, Royal Grammar School, National School, British and Canadian School, Free ditto, Natural History Society, Mechanics' Institute, Mutual Instruction Society, Shakespear Club, several public libraries belonging to different associated bodies; *National societies* of St. George, St. Patrick, St. Andrew, German, and St. Jean Baptiste. Various Religious, Bible and Missionary, Tract and Sunday-School Associations. *Benevolent institutions*, viz.:—the Montreal General Hospital, Lying-in Hospital, Dispensaries, Lunatic, Magdalen, and Orphan Asylums: 6 Turf, Cricket, and Curling Clubs, four "Free-masons and 8 "Odd-fellows" Lodges.

In the extent and importance of her trade—in the beauty of her public and private buildings—in the gay appearance of her

shops, and in all the external signs of wealth, Montreal is rapidly increasing. Its population in 1825 was 22,357; in 1831, 27,297; in 1844, by census, 44,093; and the city, together with the suburbs and the remainder of the island, are estimated at 70,000. The whole island is comprised in one seigniory, and belongs to the St. Sulpicians, who are consequently possessed of much power, which, however, they use with moderation, and are by no means rigorous in exacting the *lods et ventes* due to them on the mutation of land, which are usually compounded for.

The Ottawa, or Grand River, divides Eastern and Western Canada, and has a course between Montreal and Lake Temiscaming of above 350 miles in length; but if we regard this lake as only an extension of the river, in the same manner as we have already done Lakes Ontario, Erie, Huron, Superior, &c., while examining the course of the St. Lawrence, we must attribute the source of the river to a remote spot in the interior, more than 100 miles from Lake Temiscaming. On this lake the Hudson Bay Company have a trading post, but of the surrounding country we have no accurate description—indeed, the upper part of the river above the Falls and Portage des Allumettes, is little used except by the fur-traders, though up to that point it is regularly frequented by the *lumberers*, who find profitable and abundant employment in floating down the river, in rafts constructed for the purpose, vast quantities of pine and oak. The natural obstructions to this traffic have been greatly removed by several slides erected in various parts of the Ottawa and its tributaries. At the Allumettes, the Ottawa divides into two channels, the one passing N.E., the other S.W. of an island 15 miles long by 4 broad, which is said to be eminently fertile and fast settling; it then forms three small lakes called the Allumettes, the Mud, and the Musk Rat. Eight miles below the junction of these channels is Fort Coulanges, a trading port of the Hudson's Bay company, near which is a flourishing settlement.

Four miles further south, the Ottawa again divides, and forms an island 20 miles in length by 7 in breadth, called the Grand Calumet, and the rapids and falls at this point are exceedingly grand.

There are four principal chutes,—one, especially being wild and romantic in the extreme, from the narrow, lofty, and pre-

cipitous channel down which the vast torrent rushes with terrific violence, as if roused to fury by the opposition it had met with in its mighty career. The effect is greatly heightened by the close vicinity in which the traveller may behold this magnificent cataract. Another of these falls Mr. Barker (an eye-witness) describes as having a peculiar character. He speaks of the water as falling at first in the shape of a horse-shoe, placid and smooth as glass or oil, until it meets in the centre of the chute, and changes at once into noisy boiling foam. He also mentions a slide, over which immense quantities of red pine are annually carried, excavated in canal form out of the solid rock on the island side of the chutes. It was built by the provincial government in 1844 at a cost of more than £11,000.

For the next 10 miles after leaving the cascades, the Ottawa is picturesquely diversified by groups of beautiful and richly wooded islets, which separate it into numerous channels, through which the impetuous waters rush with various degrees of violence, while the romantic singularity of the prospect is enhanced by the banks being chiefly composed of white marble, which may be traced for several miles. At the end of this wild labyrinth of wood and water the magnificent Lake des Chats meets the view; its extreme length is 15 miles, and its average breadth 1, but several deep bays encroach upon the land, and extend its breadth in places to nearly 3 miles.

On the E. Canada side are the townships of Onslow, Clarendon, and Litchfield; and on the west side are those of Macnab, Horton, and Ross. The township of Bristol also is in a flourishing state. Three rivers, the Mississippi (or Nisisippi), the Mada-waska, and the Bouchere, empty themselves into the lake, and are fine streams, much used by the *lumberers*; their shores are gradually being cultivated, and even in the interior there are several settled tracts of land. Richly wooded islets adorn the lake, which is also distinguished by the singularly glassy appearance peculiar to the waters of the lovely Ottawa.

Kinnell Lodge, and other mansions, are romantically situated on the south bank of the lake, a few miles below the Rapides des Chats, which are 3 miles long, and pass amid a labyrinth of islands, through which they rush with great violence, terminating in the Falls des Chats, that to

the number of 15 or 16, extend in a curved line across the river. The Falls are divided by wooded islands, and are from 16 to 20 feet in height. The bed of the Ottawa then contracts, but about six miles below this point it again expands, and forms the basin of Lake Chaudière, which is 18 miles long by 5 broad, and terminates like the Lake des Chats in rapids, which dash on through the small grove-clad islets with different degrees of violence, until they reach the vortex of those broken, irregular, and extraordinary chasms called the Great and Little Chaudière (Kettle). The principal falls are 60 feet in height by 212 in width, and an immense basin of circular rock attracts by forcible indraught a considerable proportion of the boiling waters, while those beneath, in their violent struggle to escape, send up clouds of spray which conceal the bottom of the cataract, and ascend, at intervals, above its summit. A large portion of the water being unaccounted for, is supposed to escape by subterraneous channels, for half a mile further down the river the water comes boiling up, it is said, from the Chaudière. Among the strange tales told concerning these falls, is one of a cow having been one morning carried over by the waters into the Little Chaudière, and coming up uninjured at Fox Point, 10 miles down the river. Immediately below these falls, where the stream still rushes in rapid eddies, bridges have been thrown over it, and offer singular specimens of science and skill, placed as they are by the side of one of nature's grandest and most wild objects. The chain of these union bridges, as they are called from their connecting Eastern and Western Canada, consists of four principal parts, two of which are truss bridges, overhanging the channels, and unsupported by piers; a third is a straight wooden bridge, and a fourth is built partly of dry stone (with two cut lime-stone arches) and partly of wood.

The truss bridge over the broadest channel is 212 feet long, 30 feet wide, and 40 above the surface of the Ottawa. The township of Eardly extends along Lake Chaudière, and is followed by the important and rapidly increasing settlement of Hull, which is watered by the large river Gatineau, and contains valuable mines of iron and quarries of marble.

Below the Chaudière Falls and union bridges, the Ottawa has an uninterrupted navigation for steam-boats to Grenville,

60 miles distant. The current is gentle, the river banks low and generally flooded in spring to a considerable distance, especially on the north or Lower Canada side; but though the scenery is somewhat tame, it is always pleasing, and as described by colonel Bouchette, the frequently varying width of the river—its numerous islands—the luxuriant foliage of its banks—and the growing settlements appearing here and there on the skirts of the forest, or the margin of the stream, in themselves possessed of sufficient interest to preserve from monotony this part of "Ottawa's tide."

At Grenville commences the impetuous rapid termed the Long Sault, which is only descended by *voyageurs*, or raftsmen of experienced skill and energy. Below Long Sault the Ottawa continues, at intervals, rapid and unnavigable as far as Point Fortune (immediately opposite the east outline of Chatham), where it expands into the lake of the Two Mountains, and finally forms a junction with the St. Lawrence river below the cascades, where the remarkable hue of the waters of the Ottawa strongly contrasting with the blueish-green of those of the St. Lawrence, renders the line of confluence distinctly visible.

The Ottawa region is within the temperate zone; in general level, or moderately undulating, well watered, and covered with fine timber, which affords an unfailing source of remunerative employment. The Bytown tract extending for 200 miles, from the embouche of the Ottawa to the Upper Allumettes lake gently slopes to the river, has extensive level tracts of fertile soil, and is the chief seat of the Ottawa settlers. The progress of Bytown, on the right bank of the Ottawa, has been very rapid; in 1831 it contained only 150 wooden houses.

The *Saguenay River* rises in Lake St. John, which is situated between $48^{\circ} 27'$ and $48^{\circ} 51'$ N. lat., and is about 100 miles in circumference. It has a course of 108 miles before its junction with the river St. Lawrence, 100 miles below Quebec; it varies in width, and its passage, like that of other American rivers, is interrupted by foaming torrents. At its confluence with the St. Lawrence at Tadoussac in lat. $48^{\circ} 5'$, long. $69^{\circ} 37'$, the Saguenay discharges not less than 2,500,000 cubic feet of water per hour, double the quantity that the St. Lawrence sends past Quebec. The depth at its mouth in mid-channel has not been ascertained; captain Martin could not find

bottom with 330 fathoms of line; two miles higher the soundings were 140 fathoms, and at 70 miles from the St. Lawrence, from 50 to 60 fathoms. It has been since stated, that a ridge of rocks below the surface of the water, lies across the Saguenay's mouth, through which there is a channel 120 feet deep, and that in the middle the depth increases to 840 feet; if this be so, the bed of the Saguenay must, necessarily, be 600 feet below that of the St. Lawrence, into which it falls. Its reported terrific whirlpools do not exist. Thirty rivers pour their tributary waters into the Saguenay, many of them navigable for large boats. The banks of this noble stream vary from 200 to 2,000 feet in height, rising in some places perpendicularly from the river's side; the scenery throughout being wildly magnificent. The cliffs of the *Capes de la Trinité* beetle over the broad, rapid and deep torrent to the elevation of 1,800 feet, and sink plumb down 900 feet below its surface. An experienced traveller who visited the Saguenay in 1845, says—"the whole descent from Ha-Ha Bay to Tadoussac can be compared to nothing that I have ever seen for the magnificence and extent of its scenery, unless, perhaps, to the passage through the highlands of the Hudson, if you can imagine that chain of heights continued for 40 miles, and its elevation increased some hundreds of feet." The Point aux Bouleaux and the land for some distance on the west side of its mouth, are alluvial deposits, containing probably the richest soil in the world, being composed of a species of soapy-grey marl, from 30 to 40 feet deep. There is a very remarkable harbour, 40 miles from the mouth of the Saguenay, called Bay de Has, or Ha-Ha Bay, capable of affording shelter to the largest ships of the line, and to the whole navy of England, which may sail directly into the bay with the same wind that brought them to its entrance. The bay is from 7 to 9 miles in length, and 2½ in width, with good anchorage varying from 15 to 35 fathoms. Ha-Ha Bay opens into another bay or basin. Vast tracts of arable land, with a rich soil of blue and grey marl, surround these singular bays, extending to Lake Kignagami, which is joined to the Saguenay by the circuitous route of the Chicoutimi river. In the neighbourhood of Ha-Ha Bay, which is surrounded by hills, a European settlement has been commenced; and the saw-mills belonging to Mr. Price

have encouraged cultivation in the interior. Grain, especially oats, thrive, as do also potatoes. The fixed population is about 5,000. There are several sawing mill establishments around Ha-Ha Bay, and also above and below it on the Saguenay, which is well adapted for water power. The saw logs, though not so large in butt and stem as the produce of the Ottawa, or of New Brunswick, grow to a considerable height, and being more free from knots, furnish deals of a closer and better grain.

Proceeding from Ha-Ha Bay towards Chicoutimi, 18 miles higher up, the river has for 8 miles a width of about 2; its banks become much less elevated, and at the end of that distance it narrows to about half a mile, and diminishes greatly in depth. Farms, well-built wooden habitations, and crops of grain, potatoes, and hay, are to be seen in every sheltered nook or ravine running down to the river. The place has been settled by squatters from Malbay and St. Paul's Bay. Groups of well conditioned horses, and herds of fine cattle, speak well for the condition of the district. The Hudson's Bay Company have a post at Chicoutimi (60 miles from Tadoussac), consisting of a good store and out-buildings, near which is a little old chapel, built by the Jesuits in 1726, for the converted Indians of the Montaignais tribes. The mixed growth of timber here, consisting of maple, black and white birch, and spruce, indicates the strength of the soil, which appears to be a blue clayey loam. The government has laid out a town-plot on the point opposite the Hudson's Bay Company; and a new and valuable settlement will, doubtless, be formed, not only for the sawing of timber, but also for the production of food.

A few other rivers of East Canada which empty themselves into the St. Lawrence, require to be briefly noticed.

Proceeding from the Ottawa down the St. Lawrence on the northern shore, we arrive at the

St. Maurice or *Three Rivers*, which although of inconsiderable depth, is inferior in that respect only to the Ottawa and Saguenay. It drains an extent of country more than 140 miles in length, and from 20 to 100 in breadth, equivalent to 8,400 square miles. The source of the stream is a large lake called Oskelanaio, near the skirts of the N.W. ridge of mountains. Its course is generally from N. to S., inclining a little to

the eastward, and receiving many tributary rivulets and lakes during its progress.

Among the former are the Kasikan, Pisanay, Ribbon, Windigo, Vermillion, Bastonais, Rat, Mattouin, and Shawenegan. After passing the falls of the last-named river, the St. Maurice turns again to the south, and has its embouche in the St. Lawrence below the town of Three Rivers, where it forms several islands. The banks of the St. Maurice are generally high, and covered with large groups of fine majestic trees; navigation for boats is practicable for 38 leagues to La Tuque, with the exception of the portages. At Wemontichinque in 47° N. the St. Maurice is divided into three branches, of which the W. forms an extraordinary chain of lakes and navigable waters, 23 in number, varying in size, and having in many places a depth of 40 fathoms. There are about 14 small islands of different sizes in various parts of the St. Maurice, and there are a variety of falls and cascades of greater or less extent. Those of Grand Mère, about 4 miles above the Hêtres fall or cascade, are extremely beautiful and have a perpendicular descent of 30 feet. The stupendous falls of the Shawenegan, 6½ miles lower than the Hêtres, are magnificent, the fall being 150 perpendicular feet;—the river rushing with terrific violence in two channels against the face of the cliff below, then reuniting, the vast and foaming torrent forces its way through a narrow passage not more than 30 yards wide. Before quitting the St. Maurice, it may be proper to observe, that the large river Aux Lièvres, which has a course of upwards of 150 miles to the Ottawa, anastomoses with the St. Maurice, by means of a chain of lakes.

Champlain River rises in the Seignory of Cap de la Magdelaine; running N.E., it traverses the country to Champlain, enters Batiscan, where it turns S., and after forming the boundary between the latter seignory and Champlain, it falls into the St. Lawrence. This river, though of small size, is deserving of notice from an extraordinary circumstance, stated to have occurred on its banks a few years ago, which presents a similarity to the *moving bogs* in Ireland. A large tract of land containing a superficies of 207 arpents was instantaneously moved 360 yards from the edge of the water and precipitated into the river, which it dammed up to a distance of 26 arpents, and by obstructing the waters, caused them to swell to an extraordinary height: this singular event

was accompanied by an appalling sound, and a dense and suffocating vapour, as of pitch or sulphur, filled the atmosphere. My authority for this statement is Colonel Bouchette; it appears to corroborate the truth of the great Canadian earthquake of 1663.

Montmorenci River, also a tributary of the St. Lawrence, rises in the Lac des Neiges; and flows in a continued current, until it forms the celebrated cataract of Montmorenci, where its breadth is from 16 to 20 yards, and the height of the fall about 250 feet, 100 more than that of Niagara; but the volume of water is comparatively small. A slight declination in the bed of the river before it reaches the fall, gives great velocity to the stream, which is precipitated over the brink of the perpendicular rock in an extended sheet of a fleecy appearance. Immense clouds of spray rise from the bottom in curling vapours, and present an inconceivably beautiful variety of prismatic colours. The late Duke of Kent resided in a house close to the falls, which commanded a beautiful view of one of the most picturesque scenes in America.

Chaudière River rises from Lake Megantic, and waters a country of 100 miles in length, by about 30 in breadth, thus clearing nearly 3,000 square miles of territory of its redundant waters: in breadth it varies from 400 to 600 yards; and is frequently divided by islands, some of them containing many acres, and covered with timber-trees. The banks of the Chaudière are in general high and steep, thickly clothed with wood; the bed of the river is rugged, and often much contracted by rocks jutting out from the sides, which occasion violent rapids; one of the most celebrated of these is about four miles from its mouth. Narrowed by salient points extending from each side, the precipice over which the waters rush is scarcely more than 130 yards in breadth, while the height from which they descend is as many feet; huge masses of rock rising above the surface of the current at the break of the fall, divide the stream into three portions, forming partial cataracts which unite before reaching the basin which receives them below. The deep excavations the continual action of the water has worn in the rock, give a globular figure to the revolving bodies of brilliant white foam; the spray spread by the wind, produces in the sunshine a splendid variety of prismatic colours, while the dark-hued foliage on either side, pressing close on the margin of the river, forms a

striking contrast with the snowlike effulgence of the falling torrent; indeed, few falls can be compared with those of the Chaudière for picturesque beauty.

St. Francis River, S. of the Chaudière, flows through a fine country, in which the valuable territories of the *British American Land Company* is situated. The *St. Francis* passes that portion of the *St. Lawrence* called *Lake St. Peter*, and has a water communication to the district town of *Sherbrooke*, a distance of about 70 miles. The tributaries of the *St. Francis*—the *Salmon*, *Eaton*, *Coaticook*, *Massawippi*, *Magog*, &c.—water a country of great beauty; hill and dale, river and lake, forest and meadow, meet in succession the eye of the traveller. The surrounding districts, called the eastern townships, were considered by *Lord Sydenham* one of the finest parts of *Canada*. There are two remarkable lakes in this neighbourhood, namely, *Matapediac* and *Memphramagog*. The former is about 16 miles long, and 3 broad in its greatest breadth; about 21 miles distant from the *St. Lawrence* river in the co. of *Rimouski*, amidst the highlands that divide the waters running into the *St. Lawrence*, from those that run to the *Bay of Chaleur*, it is navigable for rafts of all kinds of timber, with which the banks of the noble river *Matapediac* are thickly covered. *Memphramagog Lake*, in the co. of *Stanstead*, stretching its southern extremity into the state of *Vermont*, is of a semi-circular shape, 30 miles long, and very narrow. It empties itself into the fine river *St. Francis*, by means of the river *Magog*, which runs through *Lake Scaswaninepus*. The *Memphramagog Lake* is said to be navigable for ships of 500 tons burthen.

Richelieu River, also called *Chambly*, *Sorel*, *St. Louis*, and *St. John*, affords a quick and easy water communication from the *United States* territory (*via Lake Champlain*) into the heart of *Canada*. Its principal source is in the *United States*, and estimating its length from the S. point of *Lake George* to the termination at *Sorel*, now *William Henry Town* (so called after king *William IV.*) on the banks of the *St. Lawrence*, its course cannot be less than 160 miles—the estimated extent of tract watered being 30 miles, and the surface drained 4,800 square miles; only a portion of this lies within the province of *British America*, the distance from the boundary line to the mouth of the river being about 70 miles of the 160.

The banks of the river are generally from 8 to 12 feet high, diversified on each side by many farms and extensive settlements, in a high state of cultivation; on and near it are neat, populous, and flourishing villages, handsome churches, numerous mills of various kinds, good roads in all directions, and every characteristic of a prosperous country. From its junction with the *St. Lawrence*, decked vessels of 150 tons may ascend from 12 to 15 miles, after which the navigation is carried on by boats, canoes, rafts, and craft of large dimensions. The breadth of the bed at its mouth is 250 yards, which it preserves with a few exceptions (occasioned by some small and beautiful islands), up to *Chambly* basin, which is a nearly circular expansion of the river, about a mile and a half in diameter, embellished by several little islands, covered with fine verdure and natural wood, artistically grouped. From the basin of *Chambly* to the *Isle du Portage* the breadth is 500 yards—beyond this it spreads to double that distance, and continues to widen more or less as far as *St. John's*, where there is ship navigation to the towns on *Lake Champlain*. This lake has its name from the distinguished Frenchman who discovered it in 1609, and lies between *Vermont* and *New York*; its extreme length from *Whitehall* at its southern extremity to its termination, 24 miles N. of the *Canada* line, is 128 miles; with a varying breadth of from 1 to 16 miles; its mean width being 5; and altogether covering a surface of about 600 square miles. The outlet of the lake is the *Richelieu* river above described. There are about 60 islands of different sizes in the lake, the principal of which are N. and S. *Hero* and *Isle Lamotte*. N. *Hero*, or *Grand Island*, is 24 miles long and from 2 to 4 wide. *Lake Champlain* has a depth sufficient for the largest vessels; half the rivers and streams which rise in *Vermont* fall into it, and it receives at *Ticonderago* the waters of *Lake St. George* from the S.S.W., which are said to be 100 feet higher than its own.

The other rivers being of considerably less magnitude, do not require any separate notice.

The following detail will show the divisions of *Eastern Canada*, and afford some idea of the numerous rivers and lakes by which this fine country is irrigated.

The district of *Quebec* (including *Anticosti* and other islands) extends along the *St. Lawrence* 826 miles, is in depth inland 360, and contains an area of 127,949 square miles.

Montreal (including the adjacent islands) extends 110 miles along the St. Lawrence, 310 inland, and has an area of 54,802 square miles. Three Rivers (including St. Francis and the islands) extends 52 miles along the St. Lawrence, 320 inland, and has an area of 15,823 square miles. Gaspé peninsula (including islands) extends 80 miles along the St. Lawrence, 200 inland, and has an area of 7,289 square miles. Total superficies in square miles, 205,863.

QUEBEC DISTRICT.—*Rivers. N. of St. Lawrence:* Ste. Anne, Jacques Cartier, Batiscan, St. Charles, Montmorenci, Gouffre, Mal Bay, Black River, Saguenay, Belsiamite, St. John, Ste. Anne, L., Portneuf. *S. of St. Lawrence:* Chaudière (part of), Etchemin, Du Sud, Du Loup, Greenriver, Rimouski, Trois Pistoles, Mitis, Tartigo, Matane, Madawaska, St. Francis (part of), St. John (part of).—*Lakes. N. of St. Lawrence:* St. John, Commissioner's, Quaquagamack, Wayagamack, Bouchette, Kajoulwang, Ontaretri, St. Charles, Chawgis, Assuapmoussin, Shecoubish. *S. of St. Lawrence:* Temiscouata, Matapediac, Mitis, Abawisquash, Long lake, Pitt, Trout, William, St. Francis, McTavish, Macanamack.

MONTREAL DISTRICT.—*Rivers N. of St. Lawrence:* Gatineau, Lièvres, Petite Nation, Rivière Blanche, Rivière Du Nord, Mascouche, Achigan, L'Assomption, Lachenaye, Berthier, Chaloupe, Du Chêne. *S. of St. Lawrence:* Richelieu, Sorel, Yamaska and branches, Pike, Montreal, L. Chateauguay and branches, Lacolle, Magog, Coaticook, Missiskoui.—*Lakes. N. of St. Lawrence:* White Fish, Sables, Killarney, Temiscaming, Lièvres, La Roque, Rocheblave, Pothier, Nimicachinaque, Papineau, Maskinongé. *S. of St. Lawrence:* Memphramagog, Tomefobi, Missiskoui Bay, Scaswaninepus (part of), Yamaska Bay, St. Louis, Two Mountains, St. Francis, Chaudière, Chats, Allumets.

THREE RIVERS DISTRICT.—*N. of St. Lawrence:* St. Maurice and branches, Batiscan, (part of), Champlain, Du Loup G. and L. Maskinonge, Machiches. *S. of St. Lawrence:* St. Francis and branches, Nicolet and do. Becancour, Gentilly, Yamaska (part of).—*Lakes. N. of St. Lawrence:* O'Cananshing, Matawin, Goldfinch, Shasawataia, Montalagoose, Oskelanaio, Crossways, Perchaudes, Blackbeaver, Bewildered. *S. of St. Lawrence:* Nicolet, St. Francis, (part of), Megantic, St. Paul, Outardes, Blacklake, Connecticut, Weedon, Scaswaninepus (part of), St. Peter.

The rural districts N. of the St. Lawrence, between Montreal and Quebec, are principally occupied by the French Canadian Seigniorics; and from the Isle Jesus to Three Rivers, the banks of the St. Lawrence present an uninterrupted succession of flourishing settlements. The Isle Jesus, parallel to that of Montreal, 21 miles long by 6 broad, is level, fertile, and highly cultivated. The Montreal district on the north side of the St. Lawrence, comprises the counties of Montreal, Berthier, Lachenaye, L'Assomption, Terrebonne, Two Mountains, Vaudreuil, and Ottawa, and contains a comparatively dense population. The Ottawa district, which extends more than 300 miles along the north bank of that great river, is very thinly peopled, as will be seen by the statistics of the chapter on Population.

The district of Three Rivers extends from the mouth of the River St. Anne to the upper part of Lake St. Peter, which is 25 miles long by from 5 to 10 broad. The town of Three Rivers was founded in 1618, and stands at the mouth of the St. Maurice, where it is divided by islands into three branches. There is a good wharf, where ships of large burthen may lie close to the shore. There are now about 5,000 inhabitants in the town, which derives much advantage from the excellent iron establishments on the St. Maurice.

The counties belonging to the Montreal district south of the St. Lawrence, north of the states of New York and Vermont, and west of the St. Francis, are those of Beauharnois, La Prairie, Acadie, Verchères, Chambly, Rouville, Richelieu, St. Hyacinthe, Shefford, Missisqui, and Stanstead. This district, where it borders on the St. Lawrence, is nearly flat, but gently undulates to the southward, and forms detached hills called Mounts Rouville, Chambly, Johnson, and Boucherville, &c.

The soil of this rich plain is exceedingly productive, and has a numerous population scattered in farms and villages, especially along the St. Lawrence. The scenery is described as extremely picturesque, being covered with "fruitful fields, luxuriant meadows, and smiling villages variegated by towering peaks." La Prairie, opposite to Montreal, is a handsome town, and in the high road of communication between Montreal and the United States. Chambly and St. John's are on the same route, and rapidly rising in importance. The counties within the district of "Three Rivers," on the south

side of the St. Lawrence, are Yamaska, Nicolet, Drummond, and Sherbrooke. The country rises to the eastward, and is well irrigated by the St. Francis and several fine rivers. The land along the St. Lawrence from 8 to 10 miles inland, was bestowed in grants, and formed into seigniories, while the fine undulating tracts in the rear, reaching to the frontiers of the United States, were neglected.

At the close of the last war the government began to form townships in this region, of which there are now about an hundred. Colonel Herriot laid out Drummond Ville with some military, discharged from the army on the establishment of peace; and private settlers were attracted from the adjacent United States territories by the fertility of the soil, and other advantages. Subsequently the *British American Land Company* purchased from Government a block of land containing 596,000 acres, and other tracts from private individuals, making altogether 700,000 acres, at a cost of nearly £200,000. Of this money £60,000 has been returned to them to be expended in improvements; and they have formed a harbour at Port St. Francis on Lake St. Peter, improved the road to Sherbrooke, and rendered the country very eligible for settlers, as *improved* farms, with buildings complete, may now be purchased in any part of the eastern townships at from £150 to £300 for a lot of 300 acres.

Shefford, watered by the lower branches of the Yamaska river, is, in some places, hilly and rocky. Stanstead is diversified by hill and dale, and has, in its centre, the pleasing lake called Memphramagog. Stanstead town on the east side of the lake, within two miles of the American frontier, is large and well built. A railroad is in course of formation from Montreal through Chambly, Richelieu, St. Hyacinthe, Shefford, Sherbrooke, and Stanstead counties, to the American state of New Hampshire, from whence it is projected to continue the line to the seaports of Boston, and Portland in the United States.

The district of St. Francis is divided into 29 townships; has a broken and varied surface; hills clothed with fine timber; and much valuable and well-watered land.

The Quebec district on the S. side of the St. Lawrence contains the counties of Beauce, Bellechasse, Megantic, Lotbinière, Nicolet, Kamouraska, and Rimouski. The aspect of this district is hilly; the land stretching in

irregular ridges, intersected by extensive valleys; and from 15 to 20 miles inland, a more elevated tabular surface is formed with a gradual slope to the river St. John. The land facing the St. Lawrence was granted by the French government in seigniories, but in the rear of these, townships have been laid out for English settlers who may obtain farms in fee-simple. Kamouraska is the fashionable watering-place of the Canadians, and the fine scenery, combined with sea air, render the place very attractive. On proceeding further towards the sea the country is less populous; but the settlements of Kent and Strathearn, adjoining Lake Temisconata, formed by colonel Fraser, are rising in importance.

Along Gaspé peninsula, the land adjoining the coast has been laid out, and double ranges are now forming inland. The country will soon be cultivated extensively, and will probably become very prosperous from its valuable fisheries and mines.

The vast territory embraced in the division of Upper or Western Canada, as regards the *inhabited* parts, is in general, a level, champaign country; for, from the division line on Lake St. Francis to Sandwich, a distance of nearly 600 miles westerly, nothing like a mountain occurs, although the greater part of the country gently undulates in pleasing hills, fine slopes, and fertile vallies: but a ridge of rocky country runs in a north-east and south-west direction through the Newcastle and Midland districts, towards the Ottawa or Grand River, at the distance of from 50 to 100 miles from the north shore of Lake Ontario and the course of the River St. Lawrence. To the N. of this ridge is a wide and rich valley of great extent, which intervenes between it and a rocky and mountainous country, of still higher elevation.

Farther to the north, beyond the French river which falls into Lake Huron, are lofty mountains, some of them of great, but unknown height.

The country on the N. and W side of Lake Ontario, and of Lake Erie, which is still further west, continues flat as far as Lake Huron, with occasional elevations of easy ascent. Of this tract of country only a comparatively small portion is under cultivation, the remainder being in its primitive state of forests, lakes, and rivers; the latter for the most part falling into the great lakes, or into large rivers, which again empty themselves into that great artery of the

country, the St. Lawrence. The settlements are chiefly confined to the shores, and are seldom far distant from the borders of the great lakes and rivers. In order to convey a clear idea of the physical aspect of the province, it may be expedient to proceed at once to a description of its vast inland seas.

The lakes of West Canada are almost incalculable. The following table shews the dimension of a few of the best known:—

Names.	Length.	Breadth.	Circumference.	Aver. depth.	Elevat. above the Sea.
	Miles.	Miles.	Miles.	Feet.	Feet.
Superior . .	360	140	1500	1000	627
Huron . . .	250	190	1000	860	594
Michigan . .	260	55	800	780	
Erie	280	63	700	250	565
Ontario . . .	180	60	500	500	234
Simcoe . . .	40	30	120	125	700
St. Clair . .	35	30	100	20	
George . . .	25		58		
Rice Lake .	24	2 to 5	58		600

Lake Superior, called also Keetcheegahmi and Missisawgaiegon, the largest and most elevated of those singular seas, which, in Western Canada, seem to fill the place that great mountains occupy in other countries, and to affect the climate in a somewhat similar manner, is situate between the meridians of $92^{\circ} 19'$ and $84^{\circ} 18'$ W. long., and the parallels of $49^{\circ} 1'$ and $46^{\circ} 26'$ N. lat. It is in form, an irregular oblong basin, about 1,500 geographical miles in circumference, in length from E. to W. the imaginary line which, passing through its centre, divides the territory of Great Britain from that of the United States, is 360 miles; its extreme breadth (opposite Peak Island) is 140 geographical miles, with a depth, where it admits of measurement, of from 80 to 150 fathoms, but without soundings in its centre; the waters are always extremely cold, clear, and devoid of tides, or any other kind of periodical rise and fall. During heavy gales of wind, the waters of this and the other great lakes, between which a subterranean communication is supposed to exist, rise so high, that it was at first doubted whether the smaller-class steam-boats could live in them, and the ground swell, owing to the comparative shallowness, or little specific gravity of the fresh water, is so trying as to produce sea-sickness even in old sailors. [See Geology.]

This monarch of lakes is situated to the S. of, and near the continuous chain of high

lands, which, stretching from the rocky mountains to Lake Superior in broad diluvial plains and undulations, divides the waters flowing into the Mexican Gulf from those which find their exit in Hudson's Bay; and proceeding thence in an easterly direction to the coast of Labrador, constitutes the north dividing range of the valley of St. Lawrence.

The surface of Lake Superior is 627 feet above—and the bottom of its basin (so far as it has been sounded) upwards of 500 feet below the level of the Atlantic ocean; it receives 220 tributary rivers and rivulets, but owing to the immense evaporation continually taking place from Lake Superior, the volume of water which it discharges through its only outlet (the Falls of St. Mary) into Lake Huron, is far less in quantity than that which it has itself received.

The extent of the American shore along Lake Superior from the mouth of the Ontonagon is 500 miles; that of the Canadian coast is estimated at 1200 miles. Some of the rivers on the S. coast are 153 miles long; the principal of these, namely, the Ontonagon, or Coppermine, Montreal, Mauvaise, Boisbrulé, and St. Louis, communicate with the Mississippi.

Numerous islands exist in various parts of the lake, some of which are of considerable size; Isle Royale is 45 miles long by 7 or 8 broad; Caribou is about 6 miles in circumference, and the Islands of the Twelve Apostles are 23 in number, with perpendicular cliffs of sandstone on the N. and S.E., 60 feet in height. At Les Portailles and Grand Island there are perpendicular cliffs broken into the most beautiful and picturesque arches, (under some of which a boat can pass,) porticoes, columns, and caverns of large dimensions.

The shores of Lake Superior (whose direction is E. and W.) are in several places rocky, and considerably elevated, with occasional large tracts and bays of sand. From Point Iroquois to the "Pictured Rocks," it is generally sandy, from thence to the foot of the Fond du Lac, rocky. The great promontory or peninsula of Keewanonan, which divides it into two equal sections, is very high at its central part, consisting of steep conical granite hills, rising 1,000 feet above the lake. The country around Lake Superior, whether on the American or on the British territory, is but imperfectly known; there is a great extent of hill and dale, and in some places ranges of what in West

Canada may be termed mountains, 1,500 feet above the level of the lake, and consequently 2,127 feet above the level of the ocean. The Porcupine hills, 200 feet high, approach the lake on the S. shore.

At Gros-Cap (where Lake Superior is connected by the river St. Mary, with Lake Huron) the prospect is not only beautiful but magnificent; the spectator standing beneath the shattered crags 300 feet high, has before him an apparently immeasurable flood, which, if it burst its barriers, would overwhelm a continent: in front is a low island, on the S. Point Iroquois declines from a high tabular hill, and on the N.W. a picturesque and elevated country is dimly seen in the distance.

The line of rocky hills which constitutes the N. shore of Lake Superior consists of rocks and crags, piled to the height of 150 or 200 feet at the N. end, and from about 400 to 450 feet at the S. end, where they dip into the lake from an elevation of 300 feet in detached fragments, lowering successively on each other. Along the E. shore of the lake from Gros-Cap to the river Michipicoton (125 miles) are several promontories, bays, and rivers; among these are Batchewine and Huggewong bays, off the mouth of which latter is the island termed Montreal or Hoggwart. The W. end of Lake Superior, termed Fond du Lac, is a slowly contracting *cul de sac* commencing in long. 91°, at the promontory opposite the isles of the Twelve Apostles, 80 miles in length, with a breadth of 8 to 10 miles at the end.

There are 139 rivers and creeks on the S. shore, but fewer in the eastern than in the western division. One of these, the St. Lewis, is 150 yards broad at its mouth, expanding immediately into a sheet of water 5 or 6 miles wide, and extending inland 23 miles, with a varying breadth. Some of the mountains near the lake rise to the height of 1,400 feet. Thunder mountain, for instance, which is of considerable breadth, several miles long, the western half being almost tabular, with the eastern irregular and hummocky. In general the hills have flat pine-clad summits. The *pictured* rocks (so called from their appearance), situate on the S. side of the lake towards the E. end, form a perpendicular wall 300 feet high, extending about 12 miles, with numerous projections and indentations in every variety of form, and vast caverns, in which the entering waves make a jarring and tremendous sound. Mr. Schoolcraft describes

them as "surprising groups of overhanging precipices, towering walls, caverns, waterfalls, and prostrate ruins, which are mingled in the most wonderful disorder, and burst upon the view in ever-varying and pleasing succession." Among the more remarkable objects are the Cascade La Portaille and the Doric Arch; the cascade consists of a considerable stream, precipitated from a height of 70 feet by a single leap into the lake, and projected to such a distance that a boat may pass beneath the fall and the rock untouched by the waters.

The Doric Arch has a most singular effect, having all the appearance of a work of art; it consists of an isolated mass of sandstone, with four pillars supporting an immense entablature of stone covered with soil, from which springs a beautiful grove of pine and spruce trees of considerable height.

The lake is subject to storms, sudden transitions of temperature, and dense fogs and mists. The mean heat for June is 66°, and for July 64°, and of the lake 61°; the winter is long and severe. The principal forest trees are white and yellow pine, oak, hemlock, spruce, birch, poplar, with a mixture of elm, maple, and ash, upon the banks of some of the rivers.

The waters of Lake Superior are very transparent, and their lower strata appear never to gain a warm temperature, for the water in a bottle sunk to the depth of 100 feet in July, and there filled, is, when brought to the surface, cold as ice. They abound nevertheless with trout (weighing from 12 to 50 pounds), sturgeon, and white fish as large in proportion, together with pike, pickerel, carp, bass, herring, and numerous other species.

The St. Mary's river, or strait, which connects Lake Superior with Lake Huron, is about 60 miles long.

The falls or rapids of St. Mary, by which travellers usually enter Lake Superior, are in length about three quarters of a mile by half a mile in breadth, the river being here narrowed by a broad tongue of land, protruding from the N. shore, and affording a site for the store-houses of the Hudson's Bay Company. The rapids are 15 miles from Lake Superior. in 46° 31' N. lat., and have a descent of 22 feet 10 inches in the narrow limit of 900 yards. The broken foaming billows are hurried with velocity over a slope of ledges and huge boulder stones, through a thickly wooded country, whose low level has permitted the formation on each side of

a number of islets, divided by channels, which are narrow on the left, but much wider on the right bank. The height of the latter varies from 10 to 50 feet, and is composed of light alluvial earth; this acclivity is more distant on the Canadian than on the American shore. The St. Mary river extends above the rapids about 15 miles, through a low well-wooded country, and its bed is from one mile to one and a half wide. The current ceases to affect boats 2 miles above the rapids. Immediately below the rapids, the St. Mary fall widens to upwards of a mile.

Lake Huron, the third from the Atlantic ocean of the great chain of lakes which occupy the four *plateaux* of the upper part of the valley of the St. Lawrence, is of an irregular shape. It has a circumference at the south part exceeding 720 lineal miles, and an area of 14,000 square miles. The northern part is divided by the Manitoulin islands into two parts; the eastern, called Georgian Bay, is 120 miles long by 20 broad, and has an area of 6,000 square miles; and the western, called the "North Channel," has an area of 1,700 square miles. The total superficies of the lake amounts to about 21,700 square miles. Lake Huron is nearly 594 feet above the ocean level, and has a depth of 860 feet.

Lake Michigan, is in fact, a part of the same body of water, separated only by the strait of Michilimackinac, but as it is entirely possessed by the United States, it does not come within my notice. I may, however, observe, that it is 260 miles long, by 55 broad, and 800 miles in circumference, covering an area of 16,200 square miles, or 10,368,000 acres, and navigable for ships of the largest burthen. Green Bay extends from the N. end of the lake 90 miles in a S.W. direction, with a width of from 15 to 20 miles. Across its entrance is a chain of islands, called the Grand Traverse, the channels between which admit vessels of 200 tons burthen, and sloops of equal burthen can ascend to the head of this extensive bay. From the bottom of Green Bay, boats can ascend the Ontagamis or Fox River, to within two miles of the Oniscousin, to the head of which a portage has been made, and a descent is practicable from thence to the Mississippi. The tributaries of Michigan are extremely numerous, some of them full flowing rivers, but, so far as we know, none are of any great length. Along the north shores of Lake Huron

are the Manitoulins, or Sacred Isles, many of which are from 25 to 30 miles long by 10 and 15 broad.

Drummond Island (one of the Manitoulins) is 24 miles long by from 2 to 12 broad, and at the west end approaches the main land of the United States, where it forms the strait of the True Detour, the principal commercial route to Lake Superior; the strait is scarcely a mile wide, and bounded by two promontories; the coast of the United States is here flat and woody, with morasses,—that of the island is irregular, and covered with large masses of rock. In the higher and middle parts of Drummond Isle, the elevation is from 200 to 250 feet, inclining on either side of the water, often presenting low white precipices, in broken lines, on the summit or sides of the slopes; the south coast of the island is broken into small but deep bays, with shoal points; those on the west contain many islets,—one of which, according to Dr. Bigsby, has an immense deposit of iron pyrites: the north coast is distinguished by the magnitude of its bays, and the groups of islands which cover the contiguous waters. This coast is terminated on the east, in the strait called False Detour, by a calcareous precipice of considerable beauty, 500 yards long, and 250 feet high, which forms at the top a terrace of rock, and below is separated from the lake by a narrow and high beach.

The False Detour, which separates Drummond Island from the little Manitoulin, or Cockburn Island, is from 8 to 10 miles long, and from 3 to 6 miles wide, with a mid depth of seldom less than 40 fathoms; the opening from the south is spacious and bold, it has three fine capes on the west, and one on the east. At the north outlet, the shores are very much rounded, with precipices to the west, and woody steep to the east: in front, is that part of Lake Huron termed the North Channel, studded with a few islets in pairs, and bounded in the distance by the mis-shapen hills of the northern main; on the north-west the heights of St. Joseph form a blue waving line, and on the north-east, the looming of the isles at the foot of La Cloche is just visible.

Little Manitoulin has a diameter of seven or eight miles, and an aspect somewhat similar to, though more elevated than that of Drummond Isle: the shores have successive banks or stairs formed by the debris of the lake, with here and there terraces of

limestone, *in situ*;—inland, the surface has a rugged ascent, with protruding strata in primitive masses, intersected by short ledges, which often crown the greatest heights, and form a table land of small extent, but well wooded.

Between the Little and Grand Manitoulin is the third Detour, eight miles long by four broad, which has high shores, and is clear at both outlets.

The Grand Manitoulin, or "Sacred" Isle, is 80 miles long by 20 broad, with an area of 1,600 square miles, and deeply indented by bays, which nearly divide the island; its general features are similar to those of the two preceding named islands, only it is higher, abounds more in precipices, and is rugged throughout. At the W., its features are more majestic than those of any other part of Lake Huron. At the north end of the third Detour, its shores are lined with ranges of shingle, backed by a wooded ascent: towards the centre of this strait, ledges and low precipices begin to appear along the beach, increasing to the height of 250 feet, crowned with cedars and pines: these ledges either rise perpendicularly, or are formed by enormous piles of displaced masses, from 7 to 10 yards in diameter, sloping at a high angle, sometimes advancing into the waters of the lake, and affording a hazardous passage over their slippery sides, under arches and through winding passages. Near the south-east angle of the Detour, a bluff precipice, 40 feet high, protrudes into the water, skirted by very large cubic masses of rock. From these natural precipices arise clumps of beautiful trees, and knolls of flowering shrubs, shadowed in the back ground by the dense gloom of impenetrable forests.

The interior of the island appears to be well irrigated with streams and lakes. One lake, 10 miles long, is in the form of an hour-glass, 7 miles wide at the ends, and only 1 in the centre, with an area of 55 square miles. The margin of the lake is fringed with trees to the water's edge, except on the S.W. side, where the ledges rise 20 to 40 feet. This lake is 155 feet above the level of the waters of Lake Huron. Only one stream flows into it, while three large brooks run from it. Where the water is derived from, Mr. Murray (in his recent geological survey) was unable to discover. Manitoulin island is chiefly composed of limestone; which formation not unfrequently has subterranean passages; the different lakes in

the island therefore possibly have a communication.

The insulated rocks called the Flower Pots are six miles S.S.E. of the fourth Manitoulin, one of them has an elevation of 47 feet, and consists of large tabular masses placed *horizontally* one upon the other, narrow below, but increasing in breadth as they ascend—the whole standing on a floor of rock projecting into the lake from the lofty island which bears their name. Cabot's Head is a singular looking head-land, in Michipocoton, or Georgian Bay, consisting of indented limestone bluffs, rising to the height of 300 feet, and skirted by numerous reefs and islets, and presenting on the S. W. a continued range of calcareous precipices.

From the French River (which connects Lake Nipissing with Lake Huron) westwards to the islands of La Cloche, about 50 miles distant, the lake near the shore is studded with innumerable islands; some near the main, barren, and chiefly composed of gneiss, are like heaps of ruins; others farther out in the lake, loftier, and girded with a belt of flat ground, consist of shelly limestone, and are richly wooded. Further west the islands of La Cloche, which derive their name from the belief that some of the islands are composed of dark rocks, which, when struck, sound like a bell, form a charming contrast to the bleak hills on the main, which rise 1000 feet above the level of the lake;—the islands, with their dark green forests diversified by grassy vales and clumps of trees, appear like an English park. Groups of islands occupy the lake from La Cloche to Missalaga River, 60 miles distant; some near the main are low and barren; others, elevated and woody; beyond the Missalaga is a low rocky shore. To the westward of Spanish River, which was discovered by captain Bayfield, in 1820, the coast is for the most part low, rugged, and has several safe and commodious harbours among its numerous islands and inlets. To the E. of the Spanish River the scenery is improved by the gradual approach of a high range of picturesque hills, which extend to the shores of the lake, about four miles W. of the Hudson's Bay Company's post at La Cloche. Their highest elevation is 482 feet above the lake. To the E. of the Manitoulin islands, the La Cloche hills recede to the northward, and the coast is generally low and destitute of vegetation.

Mr. Alexander Murray, assistant provincial geologist, in his survey of Lake Huron

(14th January, 1848), describes the north shore of the lake as poor, rocky, in some parts destitute of vegetation; in others thickly clad with trees of a stunted growth. But after passing these marginal forests of fir, spruce, pine, beech, and poplar, the interior in many places presents a very different character, especially in the valleys of the different streams, where there are frequently to be seen extensive valleys of rich and deep soil, producing maple, oak, elm, birch, and basswood, besides occasional groves of red and white pine of large size. Various places of this description have been cleared and cultivated by the Indians, and as at Spanish river, notwithstanding the rude state of aboriginal culture, the crops of maize and potatoes are nearly equal, both in quantity and quality, to those usually seen under the more enlightened system of tillage in West Canada. Mr. Murray remarks, that the Thessalon, Mississagui, Serpent, and Spanish rivers, have the most favourable districts for cultivation.

The Thessalon and Mississagui rise far in the interior, where the country is represented to be spotted with numerous small lakes, run in a south-east direction, and fall into Lake Huron, within 25 miles of each other. The Serpent and Spanish rivers rise to the northward, flow westward for the lower part of their course, and disembogue into Lake Huron, within 15 miles of each other.

The north-west arm of Lake Huron, which communicates with Lake Superior, is of an oblong shape, the two longer sides at their western extremities converging towards the north; it contains about 400 square miles, and is crowded with islands of all sizes; the principal, St. Joseph, is 65 miles in circumference, through it runs an undulating ridge, called the Highlands of St. Joseph, 500 feet high: the N.W. point of St. Joseph is in long. 84° , and lat. $46^{\circ} 18'$. Pelletan's Channel, which divides St. Joseph from the main, is remarkable for its fine scenery. The island (St. Joseph) belongs to the English, and its neighbour, Drummond Isle, to the United States, and on each are small military detachments belonging to their respective governments. Portlock Harbour, a British military position, 1100 miles from Quebec, is an extensive haven, interspersed with rocky islets, and girt by woody hills starting forth in a series of verdant or rocky capes. Muddy Lake, bounding the S.W. side of St. Joseph's

Isle, is a noble sheet of water 17 miles long, and varying from 2 to 7 in breadth; its shores are deep embayments, ending in grassy marshes, especially on the S.E. side.

Michilimakinac strait, the south-west arm of Lake Huron, leading into Lake Michigan, is 11 miles wide, and by its side is the peninsula called False Presquise. The view into Lake Michigan, from Michilimakinac Isle, which lies in the strait of that name, midway from either main, is remarkably pleasing; the land, which at first closes on the water, suddenly expands into a spacious sound, with curving shores and woody capes, with clusters of islands in the distance. The pretty hamlet of St. Ignace, the high white cliffs of Michilimakinac contrasting with the dark foliage around, and the blue light streaming through the sound from the vast lake beyond, offer a rich treat to the lovers of natural scenery. There is nothing particularly worthy of remark down the south-east shore, as far as Thunder Bay and Middle Islands, which are flat, calcareous, and well covered with timber of various kinds. Respecting the Gulf of Sagouina the English know little: from Pont aux Barques to the River St. Clair, is a straight line of beach, intermixed here and there with stiff clay, and, about midway, a large block of white limestone rises from the waters of the lake.

On the elevated south-east shore of the lake, in the London district, between $43^{\circ} 10'$ and $43^{\circ} 53'$ of north latitude, about 40 miles at its nearest point from the head of Lake Ontario, and 30 miles from the north border of Lake Erie, is situate the fine tract termed the Huron territory, which belongs to the Canada company. It is of a triangular shape, the base is 60 miles in length, it rests on Lake Huron, and comprises an area of nearly 1,100,000 acres. Near to the confluence of the river Maitland with the lake an excellent harbour is formed, capable of sheltering vessels of 200 tons burthen, where the Canada Company have laid out the neat and flourishing town of Goderich;—the country around is fast improving under their judicious management. The surface of the Huron territory is generally level, and frequently presents rich natural meadows. The rivers Maitland, Aux Sables, a large branch of the Thames, and other rivers and streams, water this fine district.

Georgian Bay, a vast arm of Lake Huron on the north-east side, is studded with fine harbours.

The principal British naval station in

Lake Huron is Penetanguishine (lat. $44^{\circ}57'$, long. $79^{\circ}35'$), in the south-east bight of Georgian Bay, within Gloucester harbour; it is sheltered by hills of sand and rolled blocks.

The lake we are now treating of, may be considered the centre of the great chain of waters round it, with all of which it has a direct communication. It communicates with Lake Superior by St. Mary's River; with Michigan (and through it with the Illinois river) by the Strait of Michilimackinac; with Lake Erie by the river and Lake of St. Clair; and with Lake Ontario by the Severn river,—Lake Simcoe, a chain of comparatively small lakes, and the Trent river. It has also two known communications with the Ottawa—one through Lake Simcoe, and a chain of lakes to the source of the Madawasca, which falls into the Lake des Chats—the other, up French river, through Lake Nipissing, and down a rapid river to the Ottawa, near Mataouin.

The principal rivers emptying themselves into Lake Huron are, the Thessalon, Missassagua, French, Severn, St. Clair, Maitland, and Saguina. The two former, situate in the north-east corner of the lake, are small. French River, which connects Lake Huron with Lake Nipissing, is 75 miles in length, and resembles a multitude of rivers rather than a single stream, flowing with frequent inosculation, among lengthened ridges of rock: its shores seldom present continuous lines, but are excavated with deep and narrow bays, obscured by high walls, masses of rock, and groves of dwarf pines. Its breadth varies; sometimes it extends more than one league, and is occupied by islands of every imaginable shape. Dr. Bigsby says, few American prospects exceed in singularity and grandeur those which are here afforded, by groups of long and lofty islets extending in giant rays from a centre in some dark bay,—the clear water reflecting their rugged outlines and wild foliage, amid the solemn stillness pervading these solitudes.

Two cataracts occur in French River,—by one, it leaves Lake Nipissing; the other, called the Récollet, is 20 miles below, where the black crags in the midst of the foaming waters, skirted by pine trees, impart strange beauty to the scene.

There are also several rapids; near one, the Buisson, thirteen wooden crosses commemorate an equal number of fatal accidents which occurred in crossing the foam-

ing torrent; the average velocity of which, along the whole course of the river, is about two miles per hour.

The Saguina River flows through a fine and level country, and has a breadth of 180 yards for 24 miles, when it divides into three small and very circuitous branches, one of which is called Flint River. The Saguina is 120 miles from Detroit, through the woods, and about 220 by water.

The Severn River, connecting Lakes Simcoe and Huron, is about 30 miles in length; and at its mouth, near Penetanguishine, it is one mile and a quarter in breadth: it has two falls, and a descent of 80 feet from Lake Simcoe.

The St. Clair, according to Dr. Bigsby, is the only river of discharge for Lakes Superior, Michigan, and Huron, which cover a surface of $38\frac{1}{2}$ million of acres, and are fed by numerous large rivers. I differ from this able observer, and am of opinion that the Missouri and Mississippi receive some of the waters of Superior and Michigan. It is 300 yards broad at its commencement, and flows for 26 miles, previous to its entrance into Lake St. Clair, through a luxuriant alluvial country, in a straight course, with a smooth and equable current of 2 miles an hour. At its head, there is a rapid, which flows for three quarters of a mile, at the rate of 5 miles per hour; and it enters Lake St. Clair by a multitude of shallow changeable mouths, which are, nevertheless, navigable for schooners.

Lake St. Clair is scarcely more than an intermediate link between Huron lake and the noble basin of Erie, being connected with the latter by the Detroit River; it is of an irregular oval shape, about 30 miles in diameter, with a depth of water sufficient for steam-boats and schooners. The shores are low and level, and a group of flat islands formed by the constant alluvial accumulations carried from Lake Huron by the St. Clair River, contracts its surface to the northward. This lake receives two large rivers; 1st, the Thames River (formerly Rivière à la Tranche,) which rises north of the township of Blandford, has a serpentine course of 150 miles, and discharges itself into Lake St. Clair. It is navigable for large vessels to Chatham (15 miles from its embouchure), and for boats nearly to its source; the bar at its entrance is, however, some obstacle to its free navigation. The Thames winds through a level and highly fertile country, the banks presenting many

fine plains and natural meadows. The soil is principally a sandy earth, intermixed with large quantities of loam, and sometimes marl, under which is a substratum of clay; and the river flats are exceedingly rich, from the alluvial deposits left by the overflowing of the banks. The oak, maple, pine, beech, and walnut, growing in the vicinity, are of superior quality.

London is situate on the banks of the main branch of the Thames, about 90 miles from its mouth, and in a tolerably central position with regard to the surrounding lakes. Chatham, as already observed, is 15 miles from its mouth.

The Big Bear River, or "Creek," rises near the limits of the Huron tract, and after running a course of about 100 miles generally parallel to the Thames (in one place approaching it within 5 miles), falls into Lake St. Clair at the mouth of one of its north-east channels.

The Detroit River, or rather Strait, is broad, deep, and 29 miles long; it connects Lake St. Clair with Lake Erie,—flowing, after a westerly bend, nearly due S. from the former; the greater part of its course is intersected by long narrow islands, of which the largest (Gros Isle, 8 miles long,) is within the American boundary; and the next in size (Turkey Island, 5 miles long,) is within the British territory. Isle au Bois Blanc, 1½ mile long, belonging to Upper or Western Canada, is of great importance from its situation, as it divides the channel between Gros Isle and the E. bank of the river (leaving the deepest channel on the E.), and commands the entrance of the Detroit, which is navigable for vessels of the larger size employed upon the lakes; it moreover affords, at the British settlement of Amherstburgh, an excellent harbour. Sandwich, another delightful British town, is situate 14 miles from Amherstburgh. The country around is extremely picturesque; the banks high and richly cultivated, the eye everywhere resting on fertile fields, well stocked gardens, neat farm-houses and orchards, and extensive barns. The most important American town, on the opposite bank, is Detroit, which is a strong military station. During winter, the river is completely frozen over.

We now arrive at that splendid sheet of water called—

Lake Erie, which receives the Detroit river, about 30 miles from its north-west extremity. This magnificent lake, unlike Huron or Superior (which lie generally

north and south), runs nearly east and west, between 41° 20', and 42° 50', north latitude, 78° 35', and 83° 10', west longitude, being 280 miles long, and 63½ miles broad at its centre, 700 miles in circumference, with an area of about 12,000 square miles. Its extreme depth varies from 40 to 45 fathoms, with a rocky bottom, unlike Lake Superior and Huron, which have a stiff clayey bottom mixed with shells; its average depth is from 15 to 18 fathoms; hence when the wind blows strong, the lake becomes exceedingly rough and boisterous, and a very high and dangerous surf breaks upon its shores, which often resemble the sea beach, being strewn with dead fish and shells, and frequented by various species of aquatic birds.

The surface of Erie is 334 feet above that of Lake Ontario, with which it is connected by the Welland canal, and 565 feet above the tide water at Albany, with which it is connected by the great Erie canal.

The southern shore of the lake (which is exclusively within the territory of the United States, as the north is within that of Great Britain), is generally low, from the American town of Buffalo at its eastern extremity, to Detroit at its western, except near the portage of Chataughue, where, for a short distance, it is rocky and bold, and between Cleveland and the Reneshowa river, where the cliffs rise 20 yards perpendicularly above the water, and continue of the same elevation to the River Huron. Erie, an American town of some extent, with a strong battery, dock-yard, &c., lies to the S.E. of the lake. About 20 miles from its mouth, is a tract called the Sugar-loaf country, from its numerous conical hills, which average from 20 to 30 feet in height, are composed of sand and clay, and extend several miles. The beach at this part of the lake is covered with huge black rocks, against which the waves beat with incessant roar, and during spring and autumn thick mists often obscure the sky for days together.

To return to British territory, the north shore of Lake Erie is bolder and more elevated than the opposite coast, and is of an irregular form, by reason of several capes. The banks of the lake sometimes rise to the height of 100 perpendicular feet, and consist of clay and sand, broken and excavated in a thousand different ways by the action of the waves; in some places large bodies of clay project 20 or 30 feet beyond the main bank, and lofty trees, from the roots of which the soil has been swept

away, appear supported by a few fibres. During tempests the waters suddenly rise, and beat with great violence against these sand cliffs, covering the beach, and overwhelming boats, &c. The first cape is Point Pelé, or South Foreland, on the north-west shore (near Lake St. Clair), the southernmost point of Canada, and indeed of the British dominions in North America. The next prominence is Point aux Pins (Landguard) whence there is a short westerly route to Chatham, on the Thames. Further east is Long Point, or the North Foreland (now an island), stretching eastward into the lake for about 20 miles, which forms a bay on its north-east shore. The fine river Ouse waters a thickly settled country, and falls into Lake Erie, after a course of 100 miles, where the Welland canal (see canals) which joins Erie and Ontario commences. The northern, or British shore, along the counties of Middlesex, is thickly settled.

Compared with the other great lakes, Erie, as before observed, is shallow, and is rendered rather dangerous by the numerous rocks which, for many miles together, project from the north shore, and the little shelter afforded from storms.

A constant current sets down Lake Erie when N.W. and S.W. winds prevail. The principal harbours on the south (American) shore, are Buffalo and Dunkirk (New York); Erie (Pennsylvania); Sandusky (Ohio); besides the harbour at Put-in-Bay Island.

The promontories on the north (British) side, form several good harbours and anchorage during the heavy gales which blow on this lake. Some years ago the violence of a tempest made a breach through Long Point, (North Foreland) near the mainland, converted the peninsula into an island, and actually formed a canal almost at the very spot where it had been proposed to cut one, at an estimated expense of £12,000, leaving nothing else necessary to secure a safe channel for vessels, and a good harbour on both sides, than the construction of a pier on the west side, to prevent its being choked with sand.

Both the American and Canadian shores of Lake Erie, especially towards Niagara, are among the most populous, and best settled of any districts in either country; a circumstance which accounts for the large number of vessels and steam-boats which find profitable employment on the lake. Lake Erie may be regarded as a central reservoir, from which open in all directions

the most extensive channels of inland navigation to be found in the world; enabling vessels from the lake to traverse the whole interior of the country; indeed, the map of the entire globe does not present another sheet of water so strikingly peculiar as Lake Erie, commanding, as it does, the navigable waters of North America. That justly celebrated American work, the Erie canal, commences at the city of Albany, terminates at Buffalo, in the county of Erie, and connects the waters of the Hudson river with those of Lake Erie. It is 363 miles in length, has 83 locks, (each 90 feet long in the clear, and 15 wide) of 689 feet rise and fall; having 18 aqueducts, the longest (at Rochester) 804 feet across the Genesee river; the canal is 40 feet wide at the surface, 28 at the bottom, and 4 in depth. It was commenced in 1817, and finished in 1825. Together with the Champlain canal (which extends 64 miles, with 188 feet of lockage country, connecting the Erie canal waters with those of Lake Champlain), its cost was upwards of 11,000,000 dollars, and the tolls thereon produced, some years ago, an annual income of upwards of one million dollars, which has, doubtless, since greatly increased. The Oswego canal, commencing at Syracuse in Onondaga, and terminating at Oswego, connects the Erie canal with the waters of Lake Ontario. It is 38 miles long, has 123 feet lockages, was completed in 1828, and cost 565,437 Spanish dollars. There are several other canals all branching in different directions, and connecting almost every lake and river, no matter how distant.

From the N., the vessels of Ontario visit Erie, through the Welland canal and river. This river, following its windings, is about 150 miles long, 1,000 feet wide, and navigable for 30 miles. On one of its branches called the Speed, 100 miles from its mouth, lies the thriving town of Guelph. It has been proposed to make the St. Lawrence a ship channel from Lake Ontario to Montreal, so that vessels from England may pass from Quebec into Erie, through Lake Ontario. The Ohio and Pennsylvania canals will open a communication, through the Ohio river, to the Mississippi, and another channel between Lake Erie and the Gulf of Mexico, presents itself by the way of Lakes Huron and Michigan. No country offers greater facilities for inland navigation; and as on the Grison Alps, a person may drink, without changing place, of a stream which flows into the Mediterranean, the Rhine,

and German Ocean, so it is not improbable that a point of junction may exist of the waters of the St. Lawrence, the Mississippi, and the Red River of Hudson's Bay, and the Colombia River, which are embosomed in the ocean at the extreme east, west, north, and south shores of the North American continent. Lake Erie is 560 feet above the tide waters of the Hudson, St. Clair 10 feet higher, Huron 19, and Superior 53, the last-mentioned being 642 feet above the ocean level. The sources of the Mississippi, which runs 3,420 miles, are 1,330 feet above the level of the sea.

The *Niagara River*, which connects Erie and Ontario Lakes, commences at the N.E. extremity of the former, and is the outlet not only of the waters of Erie, but also of the vast basins of Lakes Huron, Michigan, Superior, and their thousand tributaries. The river is $33\frac{1}{2}$ miles long in its bends (28 direct), and traverses a country unrivalled in richness and fertility. When first assuming the character of a river at Fort Erie, it is one mile wide, but soon contracts its bed, at Black Rock, to half a mile, and becomes rapid; then again expanding to its original dimensions, it flows on more gently, its general direction being from S. to N. From the ferry at Black Rock, where the current is 7 miles an hour, may be seen in perfection the mighty mass of waters rushing from the inland seas to join the parent ocean. Beyond Black Rock the river widens to enclose Grand Isle, 12 miles long, and 2 to 7 miles broad, with Square Isle at its head, and Navy Island at its foot (the only one in the Niagara river not ceded to the United States, by the decision of the commissioners, under the 6th article of the treaty of Ghent). Below Navy Island the river resembles a bay, being more than 2 miles in breadth, and then narrowing down the rapids to the far-famed Falls of Niagara, which are 20 miles from Lake Erie;—the whole river is navigable, except below Chippewa, where the indraught of the cataract begins to be felt.

Niagara Falls.—This celebrated cataract has been so often and so eloquently described, as scarcely to need more than a brief statement of the leading facts connected with it.

The river Niagara, previous to arriving at the ledge of limestone rocks (see geological section), over which it is precipitated with tremendous velocity, takes a sudden turn or bend to the N.N.E., its previous course

having been latterly due W., and forms what is termed the "Horseshoe Fall;"—the bend increases the violence of the rapid. On the New York side of the river, a small islet, termed Goat Island, separates a portion of the mighty torrent, and beyond it the cataracts on the British-American side may be said to commence. [See map.]

Of these the Horseshoe cataract is the largest; the curvatures of the fall have been geometrically computed at 700 yards, and its altitude, taken with a plumb line from the summit of the Table Rock, 149 feet; the American fall, narrowed by Goat Island, does not exceed 375 yards in curvilinear length (the whole irregular semicircle measures nearly three-quarters of a mile); its perpendicular height being 162 feet, or 13 feet higher than the top of the Great Fall; adding 57 feet for the fall, the rapids thus give a total of 219 feet, which is less than that of other cataracts. The following estimate by an American writer, showing the height of various falls in different parts of the globe, may enable the general reader to form a better estimate of the comparative importance of those in our territory:—The Montmorency river, 9 miles below Quebec, 50 feet in breadth, fall of 250 feet; Chaudière, near the Montmorency, 100 feet; Mississippi, above its junction with the Ohio, 700 feet wide, fall 40 feet; Missouri, 500 miles from its sources, descent in 18 miles of 360 feet—the river is 1000 feet broad, one cataract is 87 feet broad, another 47, and another 26; Passaic, N. Jersey, stream 150 feet wide, falls into a chasm only 12 feet broad, 70 feet; Mohawk, at Cahoes, near its junction with the Hudson, 60 feet; Tuccoa, stream 20 feet wide, 187 feet; the Ache, in Bavaria, fall in 5 steps, 200 feet; Tequendama, South America, the river Bogota, rises in the mountains 9000 feet above the level of the sea, and is precipitated through various gorges, chasms, and precipices, until it plunges into an immense chasm, 600 feet; Nile, at Syene, 40 feet; Gothea, in Sweden, fall at Trolhatta, 100 feet; Lattin, in Swedish Lapland, half a mile wide, fall 400 feet; Maamelsen, in Norway, as related by Mr. Esmark, fall in three places; Schaffhausen, 400 feet wide, fall 70 feet; Orco, from Rosa, in Italy, descends in one continued cascade 1,200 feet; Staubbach, in Switzerland, a small stream, fall 1,400 feet; Terni, 45 miles N. of Rome, the river Velino fall, over marble rocks, 300 feet; at Tivoli, 18 miles N.E. of Rome, the

Anio, a branch of the Tiber, fall 100 feet. The magnificence of the falls of Niagara consists in the immense volume of water precipitated over them, which has been computed at 2,400 millions of tons per day=100 millions per hour! A calculation made at Queenston, below the falls, is as follows:—the river is here half a mile broad; it averages 25 feet deep; current 3 miles an hour; in 1 hour it will discharge a column of water 3 miles long, half a mile wide, and 25 feet deep, containing 1,111,440,000 cubic feet, being 18,524,000 cubic feet, or 113,510,000 gallons of water each minute.

Goat island which divides, and perhaps adds to the sublimity of the falls, is 330 yards wide, and covered with vegetation; the eastern or American bank of the river, and the islands thereon, are low and also covered with vegetation, which, with its soft beauty, is in strong contrast to the awful scene beneath; the W., or British, bank is more bold and lofty, consisting of a horizontal ridge of rocky table-land along the margin of the rapids, and gradually increasing in elevation from 10 to 100 feet; at the foot of this ridge, on a level with the summit of the Horseshoe Fall, is the Table Rock, famous as the spot where a close view of the cataract may be obtained; indeed it forms a section of the ledge over which part of the torrent is precipitated; its flat surface jutting out horizontally about 50 feet, and overhanging the terrific gulf.

At the foot of the cataract it is possible, though hazardous, to penetrate 30 yards behind the gigantic concave sheet of the headlong flood, where a cavern is formed of about 150 feet in height, 50 in breadth, and 300 in length, well adapted for the habitation of its present tenants—the eel and the water snake. The perilous path lies along the narrow margin of whirling eddies, beneath impending rocks, and amidst the jarring elements; great self-possession is therefore necessary in making the attempt, for one false step, or the least giddiness, might plunge the adventurer into the horrible vortex; a danger the more imminent because the path leads over sharp, broken, and excessively slippery rocks, on which it is extremely difficult to retain a footing, owing to the perpetual mossy moisture they imbibe from the oozing crevices of the superincumbent cliffs. This dangerous chasm is considered the best place for estimating the height of Niagara—that vast body of water which four great lakes, the least of which is

700 miles in compass, and which altogether comprise an area of 100,000 square miles pour forth to the ocean—and the overwhelming fury with which the mighty mass foams and boils when rushing from the precipice. Here also may best be witnessed the prismatic colours in all their changing beauty, as they form with the clouds of rising spray—while the snow-white billows rolled out by the meeting waters, and the awful roar sent up from the deep abyss, with the apparently trembling and quivering motion, imparted even to the massive rocks, produce an effect on the mind of the beholder, of which it is impossible to convey an adequate idea.

But from the Table Rock above, the Falls appear less terrific, but even more beautiful. The spectator may approach so near that, if he possess nerve enough, he may, by lying prostrate on the rock, and stretching forth his arm, move his hand in the dread torrent; but it is a fearful experiment, owing to the bewildering noise of the cataract. Here may be distinguished the first ripple by which the increasing rapidity of the Niagara is marked; the eye may follow it downwards in its growing impetuosity, where its waves roll in crested curls; or watch them where they no longer roll but rush with a loud roar of wild confusion, or uniting in a sheet of transparent emerald green, plunge into the gulf, and rising again in infinitely divided spray, float gossamer-like in mid air.

Colonel Bouchette observes that, according to the altitude of the sun, and the situation of the spectator, a distinct and bright Iris is seen amidst the revolving columns of mist that soar from the foaming chasm, and shroud the broad front of the gigantic flood; both arches of the bow are seldom entirely elicited, but the interior segment is perfect, and its prismatic hues are extremely glowing and vivid; the fragments of a plurality of rainbows are sometimes to be seen in various parts of the misty curtain.

The charm of this extraordinary scene is enhanced by the sight of the wild duck, and other water fowl, swimming down the rapids to the brink of the precipice, then flying out and re-descending with manifest delight—while above, the blue bird and the wren, during their annual visit to Niagara, fly within one or two feet of the brink, and sport over the frightful fall with evident enjoyment, now verging on the crystal stream that flows over the precipice, now dipping a wing in the bright green wave or skimming

swiftly along its surface:—who would not wish at such a moment for the wings of a bird? The sound of the falls is audible at various distances according to the state of the air, and the direction of the wind; it has been clearly distinguished at Buffalo, 18 miles distant, and some say the noise has been distinctly heard at Toronto, on the opposite shore of Lake Ontario, a distance of 46 miles. The roar of the Niagara is almost indescribable, being an alternation of open and muffled sounds, likened by some to the hoarse voice of ocean surges heavily lashing the shore—by others to the heavy plunge of huge spherical rocks hurled in quick and ceaseless succession from a precipice of great altitude, into waters of unfathomable depth—and among many other similitudes, its roaring, rumbling, thundering noise, is said to approximate most nearly to the pealing artillery of two large squadrons at sea in thick weather, the auditor being about five miles distant; such as may have been heard on the heights of Aboukir, when the fleets of Nelson and Bruce sent the reverberating echo of their dread hostilities along the Nile. A "suspension bridge" for Niagara is in progress, composed of wire, which it is supposed will be capable of sustaining a weight of 300 tons, to be conveyed over at a rate of 10 miles an hour. There are to be two tracks for carriages, and one for foot passengers. It is to be formed of three spans, with abutments 200 feet high. The estimated cost is 200,000 dollars.

A little below the falls, the Niagara resumes its wonted soft beauty, and flows calmly onward to Ontario, a distance of 13 miles. On reaching Queenston, 6 miles from the falls (Upper or Western Canada side), the face of the country suddenly alters, and rises in abrupt and elevated ridges, which are supposed to have been the banks of the river in former ages. About 4 miles above Queenston, is a singular part of the Niagara river called the whirlpool, the mouth of which is more than 1000 feet wide, its length being about 2000 feet. Mr. Howison, in his interesting sketches of Upper Canada, says, that the river has formed a circular excavation in the high and perpendicular banks, resembling a bay. The current, which is extremely rapid, whenever it reaches the upper point of this bay, forsakes the direct channel, and sweeps wildly round the sides of it;—having made this extraordinary circuit, it regains its original course, and rushes with perturbed velocity

between two perpendicular precipices, not more than 400 feet asunder. The surface of the whirlpool is in a state of continual agitation. The water boils, mantles up, and writhes in a fearful manner that proves its depth, and extreme compression; the trees that come within the sphere of the current, are swept along with a quivering zig-zag motion which it is difficult to describe. This singular body of water must be several hundred feet deep, and is not known to have been frozen over, although in spring the broken ice that descends from Lake Erie collects in such quantities upon its surface, and becomes so closely wedged together, that it resists the current, and remains there till broken up by the warm weather. The whirlpool is one of the greatest natural curiosities in the Upper province, and is the more remarkable, because unaccounted for by the ordinary laws of nature.

Fort George, or Niagara, or Newark, formerly the seat of government, (distant from Toronto, round the head of Lake Ontario, about 40 miles) is situate upon a rising ground on the W. bank of the River Niagara, within a mile of the angle formed by the river and the lake. From Fort George along the Niagara river to Queenston, a distance of eight miles, there is a considerable elevation of the land on either side of the river, extending both E. and W. about 14 miles. The land rises for 10 miles further to Chippewa, but the river is only navigable for large vessels as far as Queenston, where it is about 200 yards broad; from thence to the falls it seldom exceeds 50 or 60 yards in width.

The Niagara River enters Lake Ontario in N. lat. $43^{\circ} 15' 30''$, long. $79^{\circ} 00' 40''$; the difference of height between its efflux and afflux being 334 feet on a distance of $36\frac{1}{2}$ miles. Thus—difference of elevation between Lake Erie and the head of the rapids (distance 23 miles) 15 feet; thence to the foot of the rapids (half a mile) 51 feet; height of the great fall on the American side, 162 feet; from the base of the falls to Queenston (distance 13 miles) 104 feet; and from Queenston to Lake Ontario, 2 feet—total, 334 feet.

Lake Ontario is the last link in the chain, and the most easterly of the great inland American seas, which may well rank among the wonders of the world. It lies E. and W., nearly half being in the state of New York, and is situate between the parallels $43^{\circ} 10'$

and 44° 11' N. lat., and the meridians of 76° 25' and 79° 56' W. long.; in form it is elliptical, and measures 172 miles on a central line drawn from its S.W. to its N.E. extremity; in its greatest breadth 59 miles, medial 40, and about 500 miles in circumference; its surface being 234 feet above the tide waters at Three Rivers, on the St. Lawrence, and at Albany, on the Hudson. The breadth varies greatly; from Toronto (York) to Niagara it is 35 miles; from Presqu'île to Genesee river, 60 miles; from Ernest town to Oswego, 55 miles; and from Kingston to Sacket's Harbour, round the head of Wolf or Grand Island, 86 miles. According to some examinations, the depth also varies very much, there being seldom less than 3, or more than 50 fathoms; except in the middle, where, at a depth of 300 fathoms no soundings have been obtained. The shores of Ontario are generally covered with gravel, consisting principally of small pieces of limestone, worn smooth by the action of the water; the gravel is deposited on the beach in long ridges, sometimes several miles in extent, and when consolidated with the clayey soil which generally abounds along the shore, it becomes firm under the feet, and furnishes an excellent material for the formation of roads. The water of Ontario, like that of the other lakes, and of the St. Lawrence river, is limpid and pure (though not equally so with that of Lake Huron or part of Lake Michigan), except when mixed with particles of earth from the shore, by the agitation of the winds (those of the Ohio and Mississippi are turbid, like the Ganges and Orinoco); the water of Ontario is used for drink, and also for washing, though it is not so suitable for the solution of soap as rain water. For a few days in June the water near the shores is annually covered with a yellowish scum, rendering it unfit for culinary or other purposes: the cause of this phenomenon is unknown. During the height of summer, the shore-water is too warm for pleasant drinking, unless kept some hours in a cool cellar. Gales of wind on this lake are frequent, and attended with an unpleasant "sea." Every seven years the waters of the lake rise to an unusual height, for which no satisfactory reason has as yet been given. The refractions which take place on Ontario in calm weather are very remarkable; islands and trees appear turned upside down; the white surf of the beach seems to be translated aloft; large fountains of water appear to swell upon the horizon.

The physical aspect of the shores of Ontario exhibits great diversity; towards the N.E. they are low, with swampy marshes; to the N. and N.W. the banks assume a bold appearance; which again subside to almost a plain on the southern or American shore; but well relieved, in the back-ground, by a ridge of hills, which, after forming the precipice of the Niagara cataract, stretch away to the eastward. The country bordering the lake is well wooded, and through the numerous openings, the prospect is enlivened by flourishing settlements; the view being extremely picturesque along the white cliffs of Toronto, heightened on the N. by the remarkable high land over Presqu'île, called the Devil's Nose.

A range of high land runs from the Bay of Quinté, on the N.W. of the lake, along the northern shores of Ontario to the westward, at a distance, in some places, of not more than 9 miles from them (as at Hamilton), dividing the numerous streams and head waters falling into that lake from those descending N. into the river Trent, Rice Lake, Otanabee river, and the contiguous chain of lakes. At Toronto (York) this ridge recedes N.E. from the lake to the distance of 24 miles, separating the waters of Holland river, and other streams falling into Lakes Huron and Simcoe, from those discharging themselves into Lake Ontario. The ridge then bending round the heads of the Toronto river and its tributary streams, divides them from those of the Grand or Ouse river, pursues a south-eastwardly direction towards the head of the lake, merges in the Burlington Heights, and runs along the shores of Burlington Bay, and the S.W. side of Lake Ontario (at a distance of from 4 to 8 miles), to Queenston Heights; the direction continuing eastward until it stretches into the territory of the United States, to Lockport on Erie Canal (12 miles from Lake Ontario), which it crosses and with which it runs parallel, until it arrives at Rochester, on the Genesee banks, where it subsides; thus, as it were, forming the shores of the original basin of the lake, as far as regards the greater part of its northern and southern boundary. The ridge on the American side of Lake Ontario is called the Ridge Road, or Alluvial Way; it extends 87 miles from Rochester, on the Genesee, to Lewiston, on the Niagara, and is composed of common beach sand and gravel-stones worn smooth, intermixed with small shells; its general width is from 4 to 8 rods, and it rises in the

middle in a handsome crowning arch, from 6 to 10 feet in height; at Genessee and Niagara its elevation is about 130 feet.

Many tributaries flow into Lake Ontario; which receives from the state of New York the rivers Niagara, Genessee, Oswego, and Black river, besides many smaller streams. Almost all these have a sand bar across their entrance. Among its bays, on the same side are Chaumont, Sodecs (Great and Little) Toronto, and Braddocks.

The principal river on the N. British shore is the Trent, which issues out of Rice Lake, and after a very circuitous course of 100 miles, falls into the Bay of Quinté, near the village of Sidney. The Otonabee, which falls into the N. shore of Rice Lake, may be considered a continuation of the Trent river; of which Rice Lake is merely an expansion, as is so frequently the case in American rivers. The Otonabee, like the Trent, is a broad and full river, and both are navigable for boats. From its source in Trout Lake, it communicates by a chain of lakes with Lake Simcoe, through which it is proposed to open a canal communication between Lakes Huron and Ontario.

Simcoe Lake, in Home district, between Lakes Huron and Ontario, with an area of 300 square miles, is the most extensive interior lake of Upper Canada; the elevation of its surface (estimated by the height of the frequent falls and cascades by which its outlet is broken) is 100 feet above the level of Lake Huron, and, therefore, much higher than either Lakes Erie or Ontario. It is proposed to connect Simcoe with Huron and Ontario Lakes by canals; which, however, would require frequent lockage, though the distance is comparatively small. The lands in the vicinity of Lake Simcoe are remarkably fine; and from the depth of soil and equality of the surface, peculiarly easy of cultivation.

Rice Lake, in the district of Newcastle, about 15 miles from Lake Ontario, and lying nearly S.W. and N.E., is 25 miles long by 5 wide. Its name is derived from the wild rice growing on its margin and in the surrounding marshes.

Several navigable bays occur on both sides of Ontario, particularly on the British shore, where Quinté and Burlington Bays stand conspicuous; the commodiousness of the latter (in the S.W. angle of the lake) was impaired by a sand bank—but this disadvantage is now remedied by a canal, which renders this safe and capacious bay

highly valuable; Quinté bay is secure, but its navigation rather intricate, owing to the windings and indentations of the shore of Prince Edward peninsula, by which it is fronted, together with many islands which, clustering at the end of the lake, divide its extremity into several channels. Stoney and Grenadier islands are at the east end of Ontario; Wolfe, or Grand Island, is at the entrance of the St. Lawrence; and the celebrated Thousand Islands are just below Wolfe or Grand Island—which, being placed at the commencement of the Cataract (Iroquois, or St. Lawrence) River, forms two channels leading into Kingston Harbour, bearing the names of the North, or Kingston Channel, and the South, or Carleton Island Channel.

Of the harbours, the most considerable, on the American side, is Sacket's Harbour, which is an excellent haven on the S.E. shore, well fortified, with extensive arsenals and excellent docks for the construction of the largest-sized ships of war. One of the three-decker ships of war built here by the Americans during the war, had 182 feet 8 inches keel, 212 feet on the lower gun deck, and 52 feet beam: 800 shipwrights were employed 42 days in running up this immense vessel.

Toronto, formerly called Little York, is situated in the township of York, near the N.W. extremity of Lake Ontario, in 43° 39' N. lat., 79° 36' W. long. The harbour covers an area of 8 square miles, and is formed and well-sheltered by a long low sandy, almost insulated peninsula, in some places not 60 yards broad, but widening at its extremity to nearly a mile, where there is a good light-house with an elevation of 70 feet. In 1793 when Mr. Bouchette visited this spot, he found dense forests, and a solitary wigwam. In 1794 the first rudiments of a British settlement were formed.

In 1817 Toronto contained 1,200, and in 1826 only 1,700 inhabitants. For five miles around scarcely one improved farm could be seen adjoining another; the average being one farm-house in every three miles. Toronto had no brick houses, no tinued roofs, no planked side-walks: the stumps of trees remained in the streets; the site of the present excellent market place was an unhealthy bog—no banks, no markets, no sewers—a few stores, and scarcely a schooner frequenting its wharfs. Now Toronto contains 80,000 busy and intelligent citizens—rows of handsome brick buildings roofed

with tin—numerous places of worship—splendid shops or stores, with plate glass windows—gas-lit and macadamized streets—town or city hall—a noble university—wharfs loaded with produce, and crowded with steam-boats and schooners—board of trade—mechanics' institute—public baths—a fixed and floating property estimated at £5,000,000;—and around and about the city, in all directions, villas, farms, fine orchards and gardens. The principal entrance to the city is Yonge-street—a broad macadamized road, which runs several miles into the interior, studded on either side with mansions, dwellings, and cottages of the most pleasing and comfortable aspect. There is a race-course, cricket-ground and racket-court, and a bowling-green, not excelled by any out of England. The college under the direction of Mr. Barron, and the university presided over by Dr. McCaul, are institutions of high repute. They are liberally endowed, and the instruction given in all branches of learning is on a solid basis and for reasonable terms.

The new college consists of five neat brick buildings, surmounted by an ornamental dome. A railroad is projected from Toronto to the mouth of Shawgene on Lake Huron river, 60 miles N. of Goderich, where a good harbour can be made. The distance to Lake Huron by the proposed route is 120 miles.

The classification of the Population of Toronto, and the Division of Wards, is shown in the Census of the City of Toronto, Canada, for 1845, compiled from the Assessor's Returns:

CENSUS.

Males and Females.	Wards.					Total.
	St. David's.	St. Patrick's.	St. Andrew's.	St. Lawrence.	St. George's.	
Males over sixteen	1972	1229	1126	901	450	5678
Males over five and under sixteen	795	609	506	291	160	2355
Males under five	595	466	360	214	123	1752
Females over sixteen	2115	1317	1159	740	532	5863
Females over five and under sixteen	805	555	479	266	166	2271
Females under five	645	454	364	206	114	1787
Total	6931	4624	3988	2618	1545	•

* Total 19,706

Total in 1835 9,765

Increase 9,941

RELIGIOUS PERSUASIONS.

Denominations	Wards.					Total.
	St. David's.	St. Patrick's.	St. Andrew's.	St. Lawrence.	St. George's.	
Church of England	2635	1940	1780	1233	779	8367
Church of Scotland	297	230	183	149	67	928
Presbyterian Church of Canada	520	437	325	188	127	1597
United Secession Church	147	106	57	19	26	355
Independent Presbyterians	1	4	—	—	2	7
Church of Rome	1738	624	708	641	335	4046
British Wesleyan Methodists	462	448	321	112	58	1401
Wesleyan Methodist Church in Canada	437	219	184	69	16	924
Episcopal Methodists	2	—	4	—	—	6
Primitive Methodists	119	83	42	14	52	310
Other Methodists	25	113	43	15	4	200
Congregationalists	199	171	107	43	52	572
Lutherans	—	1	—	—	1	2
Jews	—	—	2	10	—	12
Disciples of Christ	42	14	24	19	1	100
Universalists	—	—	11	1	—	12
Covenanters	23	2	—	—	—	25
Baptists	122	187	138	43	3	493
Quakers	5	2	—	2	—	9
Unitarians	13	7	—	—	—	20
Millerites	11	13	18	—	—	42
Christian	1	—	—	—	—	1
Socialists	2	—	—	—	—	2
Mormon	—	—	1	—	—	1
No Religion	130	23	40	60	21	274

An intending settler, in a journey in 1844 through the country north of Toronto, recorded the following observations, which may interest immigrants:—

"With the drive through the beautiful country on either side the Great North-road (Yonge-street) we were highly delighted. The crops, though late, were luxuriant, and hold out to the farmer promise of a large return, and good prices. Gentlemen's seats and handsome farm-houses, cheered the sight until we reached the 'Oak Ridges.' We there found the road naturally very good though a gravel track, and arrived at the 'Pinnacle Inn,' after attaining a height of 800 feet above the waters of Ontario;—having passed the picturesque little sheet of water called 'Bond Lake' on the right, said to be without soundings; a little beyond the 'Pinnacle,' the road gradually descends, until the eye at length rests upon a rich and widely extended region, consisting of hill and dale, thickly covered with rich farms of the most valuable description. Before us lay this beautiful picture, stretching fifteen or twenty miles, whilst far off to the right we now and then obtained peeps at the vales of Newmarket and Davidtown. On our left we passed scores of thriving, beautiful farms, whose brick houses and comfortable out-buildings betokened the wealth of the owners. Among these stands conspicuous the handsome residence of Captain Irving. At Holland Landing (head of the Holland River) we came to a pretty little village, with mills, shops, &c., and were comfortably lodged at Fraser's hotel, after a pleasing drive of six miles. The following morning at seven we were on board the well regulated steam-boat Simcoe. A calm lake and the good fare provided by our obliging and intelligent host, Captain Laughton, made this part of our excursion

peculiarly pleasant. The windings of Holland River for seven miles through a meadow of reeds and wild grass are extremely curious: in one instance the angle of the Elbow was so acute, that the head of the boat was within a few points of the compass of the house from which we started. This prairie abounds with wild duck, and on its margin are found woodcock and snipe, in numbers to gratify the most fastidious sportsman. Emerging from this crooked stream, we struck boldly into the transparent waters of old Simcoe. On the east shore of the lake, and seven miles from the mouth of the river, we stopped at Roach's Point, a pretty little settlement, with an inn, store, &c. The farms we passed in coming to this place studded thickly the whole shore, and the wheat crops particularly were remarkable for their fine appearance. Leaving this place we passed close to Snake Island, a pretty spot, containing 400 acres, or thereabouts. Here the Government has erected twenty or more comfortable cottages for Indian families, who pass their time happily and profitably in cultivating their farms, in hunting and in fishing. A church with a tin-covered spire is soon to be built for them; this will greatly add to the present cheering aspect of their little hamlet. Twelve miles from Roach's Point, after running by acres of fine farms and fields waving with luxuriant wheat, we came to Jackson's Landing, a sheltered, pretty little nook, with a shore so bold that the steamer could any where lie alongside it. A little in the rear of this harbour is a populous settlement on the road leading to Toronto. Near the Landing is the fine farm and pretty stone cottage, with green verandah, of Captain Bouchier, R.N. A mile beyond this, the spire of a neat church rears its head above the rich surrounding foliage. A resident clergyman is in charge. Near the church, on a pretty jutting point, stands the handsome residence of Mrs. Sibbald, surrounded apparently by that neatness and comfort which render a country life desirable. Captain Lee's fine farm, and one belonging to Mr. Campbell (late of the North American Hotel), adjoin that of Mrs. Sibbald. The forest is here pierced every quarter of a mile by a pretty clearing, with its dwelling, barns, and out-houses around it, until we arrive at Beavertown, or Little Talbot, where the lesser branch of the Talbot River falls into the lake. We passed between the main shore and Georgina Island, a naturally beautiful spot, six miles in length, and containing perhaps 2000 acres. It belongs, like all the other islands, to the Indians, and is taken care of by the Government for their use as a hunting and fishing station.

Beavertown, or Beaverton, is a flourishing little place, contains two saw-mills and a grist-mill, and is supported by a fine settlement in the rear: the water would drive extensive machinery. Opposite this village is another Indian island, called Thorah Island, containing about 1,200 acres. Beyond this we passed the mouth of the Great Talbot River, over which a bridge was visible from the boat. We now came to Chewitt's Point, in the township of Mara, and then stretched across a deep bay, to Creighton Point. This is a beautiful strip of land, containing upwards of 900 acres, covered with fine forest trees, among which the elm, the ash, the oak, and the maple predominate. On this Point the Indians make every spring many thousands of pounds of maple sugar. This beautiful Point, together with the whole frontage, until we passed through the Narrows (probably fifteen miles along the line of shore), is the property of Captain Creighton, of To-

ronto, who purchased it as long since as 1831. We now rapidly approached the beautiful entrance to the far-famed Narrows.

Lake Simcoe is in length about 45 miles, and varies in breadth from 2 to 20 miles; perhaps the widest part is between Thorah and the county town, Barrie. The basin which contains this limpid lake is formed of secondary limestone, alternating with clay and marl. At Holland Landing the lake has evidently receded from the foot of the hill, where Thorne's mill now stands. This hill branches off to the north at the Landing, and passing by the rear of the Barrie, skirts the lake until it arrives at the Narrows, where, passing in rear of the little village of Orillia, it shoots away toward the north-west. On the east shore of the lake the soil is said to be richer than that on the west. This may be occasioned by the westerly winds causing the *debris* of the west bank to be deposited on the shore. The country rises gradually from the water on the east shore of the lake, until it attains an elevation of 300 feet. The circumference of Lake Simcoe being 120 miles, it is natural to suppose so large a body of water would make for itself a channel in some direction. This has been effected at the Narrows, where the hills begin to recede from the lake. At this point there is a perceptible current toward the north, which, increasing as it flows through this contracted highway, acquires the velocity of three or four miles per hour, until it becomes mingled with the waters of the pretty Lake Couchiching. Lake Couchiching is 40 miles in circumference, and forms at its N.W. extremity the river Severn. Here its waters, mingled with those of Lake Simcoe, are hurried over rocky precipices and rapids, until finally they reach the surface of Lake Huron. The Narrows, from shore to shore, are only 300 yards. The bottom is a greasy marl, through which the water has worn a channel nine feet deep, and only thirty feet in width. We saw shoals of large fish as we passed through, the transparency of the water enabling us to distinguish the class they belonged to at a depth of several feet. The steamer at length landed us within the little lake, at the village of Orillia. A comfortable inn and clean beds induced us to prolong our stay three days. At Orillia a good road conducts the traveller to Coldwater, on Lake Huron. About 2,000 bushels of surplus wheat were purchased last winter at Mr. Dallas's fine mills, near the Narrows, for which he paid (and is now paying) 5s. cash per bushel. At Holland Landing 10,000 bushels were brought from the circuit of the lake, and produced the same price. In the Indian village in Lake Couchiching, are quarries of free-stone, limestone of several shades and kinds, and abundance of fire-stone. These quarries are worked without the use of gunpowder, and produce slabs of an extraordinary size. The day is probably not far off when all the pretty points at the Narrows will be studded with the cottages of gentlemen, attracted thither by the healthfulness of the climate, the beauty of the scenery, or the richness of the soil. Shooting they will have in abundance; and the waters abound with maskinonge, the white-fish, salmon-trout, black bass, and herrings of a very fine and large kind: the smaller fish are also plentiful.

Tiny, one of the townships beyond Lake Simcoe, now in progress of settling, is about seventeen miles in length, and averages about seven miles in breadth. It is bounded on the west and north by Lake Huron, on the east by Penetanguishene Bay and Penetan-

guishene-road, and on the south by the Township of Flos. The village of Penetanguishene is situated on the east side of this township, near the southern extremity of Gloucester Bay. In this village there are four merchants' stores; but their trade is chiefly with the Indians for fur. The buildings, with the exception of about four or five, are all of log. The inhabitants, in all, are probably about one hundred, and are chiefly composed of French Roman Catholic Canadians, a good deal intermixed with half-caste Indians, and are principally dependent on the fur trading and fishing for their support. There is a Catholic church and clergyman in the place, and a rather large congregation is afforded between the village and neighbouring settlement. There are now about a thousand inhabitants, who have grist and saw-mills, and are rapidly thriving. About two miles further north, or up the Bay, on the Township of Tay Side, there are Government Barracks and a military establishment."

On the margin of Lake Ontario, between Toronto and Kingston, the whole country is extremely fertile and beautifully cultivated. Port Hope, Cobourg, Bond Head, and Whitby are the principal towns and ports.

Newcastle harbour, in the township of Grathame, is situate somewhat more than half-way between Toronto and Kingston; it is well protected from winds, and almost encircled by a peninsula, which projects in a curve into the lake, forming a basin of sufficient depth for shipping, and affording a good landing. The harbour is somewhat difficult of entrance.

Peterborough, the district town of Newcastle, is well placed at the foot of a series of rapids formed by numerous scattered inland lakes and streams. A recent visitor says:—

"Between the village of Peterborough and the navigable waters in the rear, a space of eight miles intervenes, presenting a wild turbulent rush of waters, alternately swift streams, dangerous rapids, and every mile or so a noisy cascade. The river flows through a limestone formation, in some instances stretching from bank to bank, one hundred yards of solid smooth rock. Beyond this chain of rapids the waters spread out in every form and shape the imagination can suggest. Lakes varying in size from one to ten and twelve miles in diameter—the rolling lands covered to the margin with the luxuriant foliage of boundless and magnificent forests: the soil singularly fertile; the climate favourable to human health. Along the surface of these waters the voyager may sail in deeply-laden boats for ninety miles east and west, and thirty miles north and south: but the stillness of the forest is around him, with few exceptions nothing greets his gaze save the monotonous outline of the sombre and gloomy forest; an occasional savage may be seen chasing the deer, spearing his fishy prey, or awaiting the dark clouds of wild fowl which resort to these haunts almost undisturbed. The signs of civilization are few and far apart—stretching away to the west, and ascending a deep placid river, bounded by high cliffs of limestone,

the voyager approaches a fall but little known, yet combining in an eminent degree all the attributes which constitute beauty. From Balsam Lake, an opening of circular form and immense depth, Indian traders are in the habit of ranging the country along the shallow streams, until they gain the waters of Simcoe on one side, and approach those of the Ottawa on the other; but as yet no indications of settlement or agricultural improvement are perceptible. Descending the stream from that point, we first enter a small lake surrounded with swelling ridges of pine, from whence the waters pass through a channel called after an ancient Indian tribe who dwelt upon its margin, and whose graves yet remain—the Otonabee, a name soft and musical if pronounced in the Indian dialect. This stream leads the navigator into Rice Lake, from thence he passes down the Trent into the Bay of Quinte. Such are the outlines of the country—such the facilities and difficulties of its navigation."

In 1827 the spot on which is now the flourishing town of Guelph, with its surrounding rich agricultural district, was a dense, untrodden wilderness. The value of the land along the Detroit river in the western district increased 300 per cent. in three years. Dr. Rolph, writing in 1841, stated that "some farmers who would have sold their farms two years ago for 1,200 dollars, have refused this year 20,000 dollars for the very same property."

The town plot of London at the forks of the Thames, was only surveyed in 1826, it now contains five thousand inhabitants; a thousand houses; a court house, several temples of worship, large market-place, schools, public libraries, hotels, and many excellent merchants' stores. A fifth of an acre for building fronts, recently sold at the rate of £100 an acre, whereas the original town lots had cost but £10 an acre.

Hamilton is a flourishing town at the western extremity of Ontario. It contains buildings which would be no disgrace to any city in Europe. An extensive nail manufactory has been established, with machinery equal to any other of the kind in America. Forty acres of land that might have been bought in 1833 for £600 had so increased in value in 1839 that one acre sold by public auction for £1,250.

The progress and state of the different divisions of Western Canada will be shewn when examining their products in 1848.

Kingston, distant from Toronto, 184, and from Montreal 180 miles, stands in lat. 44° 8', lon. 76° 40' W., it is advantageously situate on the north bank of Lake Ontario at the head of the river St. Lawrence, and separated from Points Frederick and Henry, by a bay which extends a considerable dis-

tance to the N.W. beyond the town, where it receives the waters of a river flowing from the interior. Point Frederick is a long narrow peninsula, extending about half a mile into the lake in a S.E. direction, distant from Kingston about three quarters of a mile. This peninsula forms the west side of a narrow and deep inlet called Navy Bay, from its being our chief naval dépôt on Lake Ontario. The extremity of the point is surmounted by a strong battery, and there is a dockyard with store-houses, &c.

Point Henry, which forms the E. side of Navy Bay, is a high narrow rocky ridge, extending into the lake in the same direction as Point Frederick. It is crowned by a fort, built on the extremity of the ridge, and occupying the highest point of ground in this part of Canada. The dock-yard, storehouses, slips for building ships of war, naval barracks, wharfs, &c., are on an extensive scale; during the war, a first-rate (the *St. Lawrence*) carrying 102 guns, was built here, and in a case of emergency, a formidable fleet could in a very short time be equipped at Kingston. About the year 1600 the French seeing the value of this position commenced a settlement, which was at first called by the Indian name of Cataragui, and subsequently Frontenac; but on our conquest of the province it received its present name.

Kingston, next to Quebec and Halifax, is the strongest British post in America, and next to Quebec and Montreal, the first in commercial importance; it has rapidly risen of late years, by becoming, through the means of the Rideau canal, the chief entrepôt between the trade of Eastern Canada, and all the settlements on the great lakes to the westward. In 1828, the population of the city amounted to 3,528. In 1848 to 8,360.

The increasing value of property is shown in the fact that Bishop Macdonnel, in 1816, bought 11 acres for £600, and in 1840 sold the land in building lots for £1,000 an acre. In the same year the Rev. Mr. Herchimer held 200 acres valued at £200, and in 1841 government bought 188 of the acres for £30,000, and the proprietor reserved to himself 12 acres facing Lake Ontario. In 1809, an estate of 100 acres, known as the Murney property, was purchased from the original grantee for £500, and in 1840 government purchased 32 acres of the estate for £19,000. Kingston has the finest market-place in America, and 300 or 400 teams may be seen at one time in the market. In a few years 700 houses were built,

principally of dark freestone, at a cost of £400,000. The population doubled itself in 4 years. A fleet of 200 barges, and schooners of 60 to 250 tons burthen, are employed at Kingston in transshipping the up and down freight on the lake. What a contrast the present navigation on the lakes offers to the period when the French built the first vessel on the shores of Lake Erie in 1679, and named it the *Griffen*. She was manned by a crew of Frenchmen, and commanded by La Salle, the celebrated voyageur, who navigated the Mississippi to the sea.

The importance of the inland navigation afforded by the St. Lawrence and the other great lakes it is difficult to overrate. Vessels may now traverse an extent of water equal to the distance between Europe and America. Supposing a steam propeller to take freight at Ogdensburgh, an inland point on the St. Lawrence, more than 650 miles from the Atlantic, for Chicago, she travels a distance of 1,300 miles. Having freight now offered for the military posts on Lake Superior, she runs (supposing the St. Mary's lock at the Sault to be built) an additional 800, making it 2,100 miles; and her direct return route with produce would be full 1,000 more, making in all a distance equal to that between America and Europe. This inland journey may be increased to 4,000 miles by commencing the trip at some of the lower ports on the St. Lawrence. As an illustration—

Quebec is 350 miles from the ocean. The completion of the Welland canal and similar works on the St. Lawrence invites commerce, and by the above means steam-vessels will extend their trips beyond Montreal and Kingston to the head of Lake Ontario, at the terminus of the Welland Canal, a distance of 600 miles. From this point they proceed westward to Chicago, 1000 miles further, and return to Quebec with grain or produce, without a single transshipment. This direct business trip is 3,200 miles long, and may, of course, be continued to the ocean. The trade is now with Kingston and Montreal, but it must extend still further down on both sides of the St. Lawrence.

By means of the Welland canal the navigation of the lake is uninterrupted for the distance of 844 miles from E. to W., and from N. to S. for a varying distance, of which the extreme range is 347 miles. A large part of the 400,000 square miles of

country which these lakes drain is remarkably rich and varied, and, when cultivated, yields in abundance subsistence for man and beast.

On the Ontario Lake 40 steam-vessels are employed in traffic and in the conveyance of passengers. During the winter the N.E. part of Ontario, from the Bay of Quinté to Sacket's Harbour, is frozen across; but the wider part of the lake is frozen only to a short distance from the shore. On Lake Erie, which is frozen less than Ontario, there are about 100 steamers of various sizes, some of them carrying 1,500 passengers at a time to the settlements on Lake Michigan; the northern parts of Huron and Michigan are more frozen than either Erie or Ontario; and Superior is said to be frozen to a distance of 70 miles from its coasts. On Lake Huron there are only a few steamers; and on Lake Superior, a lesser number; but one steamer continually plies to and from Buffalo. The navigation of Ontario closes in October; ice-boats are sometimes used when the ice is *glare* (smooth). One of these is described by Lieut. De Roos as 23 feet in length, resting on 3 skates of iron, one attached to each end of a strong cross-bar, fixed under the fore part,—the remaining one to the stern, from the bottom of the rudder, the mast and sail are those of a common boat: when brought into play on the ice, she could sail (if it may be so termed), with fearful rapidity, nearly 23 miles an hour. In addition to her speed before the wind, she is also capable of beating well up to windward,—requiring, however, an experienced hand to manage her, in consequence of the extreme sensibility of the rudder during her quick motion.

The appearance of the N.E. extremity of Ontario, at its junction with the St. Lawrence river at Kingston, is so strikingly beautiful, as to have obtained for it the poetical appellation of the "Lake of the Thousand Isles." As the St. Lawrence issues from Ontario, it is 12 miles wide, divided into two channels by Wolfe Island, which is 7 miles broad, the widest channel on the N. side being $3\frac{1}{4}$ miles across.

The second British township, Leeds, 32 miles below Kingston (at the mouth of the Gannanqui river) has an excellent harbour: the river continues narrowing down to Prescott, which is distant 62 miles from Kingston, 243 from Toronto, and 385 from Quebec. Prescott is well defended by its stronghold, Fort Wellington, which commands the navigation of the river.

A few miles below Prescott the St. Lawrence commences flowing rapidly, and has a shallow course for four miles, with a speed of from six to eight miles an hour, interrupted by two small rapids, the Du Plat and Galoose, half a mile, and a mile and a half long. The most difficult rapid is the Long Sault, in front of Osnaburgh above Cornwall (46 miles from Montreal) which is about 9 miles long, intersected by several islands, through whose channels the water rushes with velocity, so that boats are carried on it at the rate of 27 miles an hour; at the foot of the Rapid, the water takes a sudden leap over a slight precipice, whence its name.

The Cedar Rapids, 24 miles from La Chine, are 9 miles long, and very intricate; the waters run at the rate of from 9 to 12 miles an hour, with in some places only 10 feet depth in the channel. The Coteau du Lac rapid, 6 miles above the Cedars, is 2 miles long, intricate, and in some places only 16 feet wide.

To improve the navigation between Eastern and Western Canada, and to place the internal traffic beyond the reach of molestation during any war that might unfortunately occur with America, has been a leading object with the British government and local legislature, and large sums have consequently been expended on different public works, and especially on canals.

The *Rideau Canal*.—This far-famed undertaking, which is not, properly speaking, a canal, but rather a succession of waters raised by means of dams, with natural lakes intervening, commences at a small bay, called Entrance Bay, in the Ottawa, 128 miles from Montreal, and 150 from Kingston, in N. lat. $45^{\circ} 30'$, W. long. $76^{\circ} 50'$ —about a mile below the Falls of Chaudière, and one mile and a half above the point where the Rideau river falls into the Ottawa. From Entrance Bay the canal is entered by eight locks; it then passes through a natural gully, crosses Dow's Swamp—which is flooded by means of a mound—Peter's gully, by means of an aqueduct, and joins the Rideau river at the Hog's Back, about six miles from Entrance Bay. At the Hog's Back there is a dam 45 feet high, and 400 long, which, by throwing back the river, converts about 7 miles of rapids into still, navigable water. The canal rises into the river by means of a lock. A series of locks and dams now commences, with occasional embankments.

At the Black Rapids there are a dam and lock, 138 miles from Montreal; a dam, three locks, and two embankments, at Long Island Rapids, which render the river navigable for 24 miles, to Barret's Rapids, 167 miles from Montreal; 8 dams and 14 locks bring the canal to Olive's Ferry, 210 miles from Montreal, where the Rideau Lake contracts to 463 feet wide, and a ferry connects the road between Perth and Brockville. At the Upper Narrows, 16 miles further, the Rideau Lake contracts again to about 80 feet across, over which a dam is thrown with a lock of 4 feet lift, forming the Upper Rideau Lake into a summit pond of 291 feet above Entrance Bay, in the Ottawa; 6 miles further is the isthmus, which separates the Upper Rideau Lake from Mud Lake, the source of the River Cataraqui. The canal is cut through this isthmus, which is one mile and a half wide; 5 miles lower down is the Isthmus Clear Lake, 330 feet wide, through which a cut is made, to avoid the rapids of the natural channel.

From thence to Cranberry Marsh, 17 miles from Isthmus Clear Lake, 255 miles from Montreal, and 23 from Kingston, there are 3 dams and 6 locks. The Marsh is about 78 feet above the level of Kingston harbour, and about 8 miles long. Besides flowing into the Cataraqui river, the waters of this marsh or lake burst out at White Fish Fall, and flow into the Gannanoqui river, which is the waste weir for regulating the level of the water in the Rideau Lake (the summit pond); thus the water in the whole line of canal, whether in times of flood or drought, is kept at a steady height. At Brewer's Upper and Lower Mills, 18 and 17 miles from Kingston, there are 3 dams and 3 locks; and at Kingston Mills, 5 miles from Kingston, one dam and 4 locks. The Canal, or Cataraqui River, falls into Kingston Bay at these mills, at a distance from Montreal of 273 miles.

The canal now described opens, it will be perceived, a water communication between Kingston and the Ottawa, a distance of 132 miles, by connecting together several pieces of water lying in that direction, viz.: Kingston Mill-stream, Cranberry Lake, Mud Lake, Rideau Lake and river, the length of the cuts not exceeding 20 miles. The difference of level is 445 feet; about 20 miles are excavated some parts of the distance through rocks. There are 47 locks, each 142 feet

in length, 33 in breadth, and with a water depth of 5 feet, which admit vessels under 125 tons. The expenditure on this canal greatly exceeded the original estimate, which was only £169,000—the next, before the plan of enlarging the locks was adopted, amounted to £486,000, which was raised by the addition of the locks to £762,673; but the total expenditure is now calculated to exceed one million sterling. The locks were originally planned upon a scale to correspond with those on La Chine canal, i. e. 100 feet by 20; these dimensions were subsequently increased to 142 feet in length by 33 in width, with a depth of 5 feet water; hence a considerable augmentation of expense. The canal has been in use 16 years, and every part of it looks fresh and perfect as when first finished. At each lock station, neat lock-master's houses have been built, trees planted, and grass-plats formed; the whole surrounded by substantial iron railings, stone walls, or wooden fences.

A more striking proof of the good effect of this fine canal can scarcely be desired, than that 15 years ago there was but one farm on the long bend of the Rideau river, 27 miles, while now there is scarcely an unsettled lot. The country along the banks of the canal, and the shores of its numerous lakes, is very generally occupied. The former hamlet of Newborough, at the Isthmus, has become a thriving, well-built, and populous village, with stores, taverns, post office, &c. Westport, on the Upper Rideau Lake, is also thriving. The land around is good, crops excellent, and settlements are forming in the interior.

The *Welland Canal* connects Lake Erie with Lake Ontario. It was not undertaken by government, but by a company incorporated by the legislature in 1825. This canal communicates with Lake Ontario by the Twelve-mile Creek, and is conducted over the range of hills forming the barrier of Lake Erie, at the Falls of Niagara, by means of locks, until it meets the Chippawa at 8½ miles from its mouth, which it then ascends for about 11 miles, and joins the Ouse upon Lake Erie at about one mile and a half from its mouth: the shifting bar at the entrance of the Ouse being remedied by piers extending into deep water beyond the bar. The length of the canal is 42 miles, its width 56 feet, and its depth 8½: the summit level is 330 feet, the ascending locks are 37 in number (made of wood), 22 feet wide, and 100 feet long. The cost

of this canal has been upwards of £500,000; but it now yields a rapidly increasing return for the capital expended.

The *Grenville Canal* consists of three sections, one at the Long Sault on the Ottawa—another at the fall called the Chûte à Blondeau, 60 miles from Montreal and 218 from Kingston—and a third at the Carillon Rapids, 56 miles from Montreal and 222 from Kingston, opening into the Lake of the Two Mountains, through which an uninterrupted navigation is maintained by steam-boats to La Chine, 9 miles above the city of Montreal. This canal renders the navigation of the Ottawa, between the Rideau and Montreal, complete. All the locks on the Carillon, and on the Chûte à Blondeau, are of the same size as on the Rideau; but on a part of the Grenville canal, which was commenced before the large scale was adopted, some locks, and a part of the cuttings, will only admit boats 20 feet wide; the locks on La Chine also are calculated for boats only 20 feet wide; the navigation for boats above 20 feet wide is interrupted at the Grenville Canal, and if large boats be used on the Rideau, and on the higher part of the Ottawa, all goods must be unshipped on arriving at the Grenville canal, and either be conveyed by portage, or removed to smaller boats.

The distance from Kingston, on Lake Ontario, to Bytown, where the Rideau river joins the Ottawa, is about 150 miles; from Bytown to the Grenville canal, 64 miles—total 214 miles, through the whole of which line, the locks and cuttings are of a size to admit steam-boats 134 feet long and 33 feet wide, and drawing 5 feet of water.

The Montreal communication with the Ottawa, by the canal between the former place and Lake St. Louis, at La Chine, near Montreal, is termed—

La Chine Canal—and is 28 feet wide at the bottom, 48 at the water line, has 5 feet depth of water, and a towing-path; the whole fall is 42 feet with the locks; the length being about 7 miles. It is the property of a company; was begun in 1821, and completed in 3 years, at a cost of £137,000, which was defrayed by the company, slightly assisted by government, in return for which aid the public service is exempt from toll.

The *Cornwall Canal* is 12 miles in length, and has 6 locks, which obviate the Long Sault rapids. The locks are on a large scale,

capable of admitting first-class steamers on the river, and its stone work is very massive.

By means of the great and useful works just mentioned, a large extent of country is opened up to the industry of British settlers: there is continuous steam-boat communication in Upper Canada for about 460 miles, viz., from the Grenville canal, on the Ottawa, to Niagara. Many other canals are in contemplation, some even commenced, such as that projected between the Bay of Quinté and Lake Huron, through Lake Simcoe, which will render us independent of the Americans on the Detroit river. The Thames is also to be made navigable for steam-boats, from Chatham up to the Port of London: and if railroads do not take the place of canals, there is little doubt of the greater part of Canada being, in a few years, intersected by them. The value of canals and steam navigation may be judged of from the fact, that, in 1812, the news of the declaration of war against Great Britain, by the United States, did not reach the post of Michilimackinac (1,107 miles from Quebec) in a shorter time than two months; the same place is now within the distance of ten days' journey from the Atlantic. A similar remark applies yet more strongly to railways. The route from Montreal to Kingston, 171 miles by the St. Lawrence, and 267 miles by the Rideau canal, *via* St. Ann's, is now performed by a large, fast, and elegant class of steamers, passing down the Long Sault rapids to the Côte du Lac, and returning by the Cornwall canal. From the Côte du Lac to the Cascades there is 16 miles to be travelled by stage, thence to Lachine by steamer, and thence to Montreal 9 miles more by stage. The voyage may also be performed in a smaller class of steamers, which pass down *all* the rapids direct to Montreal, and return by the Rideau canal. The trip round occupies 8 days. About 30 small steamers and propellers are employed on this line. Recently a fine screw schooner, named the *Adventure*, belonging to the "Toronto and St. Lawrence Steam Navigation Company," went from Toronto to Montreal (470 miles) laden with freight, in 2½ days.

Western Canada was divided by the Act 8 Vic. c. 7, into 20 districts, which are again subdivided into 32 counties, for the more effectual legislative representation and the registration of property. The counties are laid out in townships, surveyed, and prepared for location.

86 DISTRICTS, COUNTIES, AND TOWNSHIPS OF W. CANADA IN 1848.

Districts.	Towns not Represented.	Counties, Ridings, and Cities.	Number of Townships in each County.	Population of Counties.	Population of Districts.
Bathurst . . .	Perth . . .	United { Lanark . . .	13 }	—	29,448
Brock . . .	Woodstock . . .	Oxford { Renfrew . . .	11 }	20,219	29,219
Colborne . . .	Peterborough . . .	Peterborough . . .	19	21,379	21,379
Dalhousie . . .	. . .	Carleton . . .	10	19,245	25,520
		Bytown, town of . . .	—	6,275	
Eastern . . .	. . .	Stormont . . .	4	11,471	38,653
		Dundas . . .	4	10,723	
		Glengarry . . .	4	15,005	
		Cornwall, town . . .	—	1,454	
Gore . . .	Brantford . . .	Wentworth . . .	8	19,546	59,015
	Dundas . . .	Halton . . .	8	29,580	
		Hamilton, city . . .	—	9,889	
Home . . .	. . .	York { North riding . . .	11	17,050	106,352
		South . . .	4	21,033	
		East . . .	4	24,530	
		West . . .	5	20,236	
		Toronto, city . . .	—	23,503	
Huron . . .	Goderich . . .	Huron . . .	21	20,450	20,450
	Prescott . . .				
Johnstown . . .	. . .	Grenville . . .	5	17,160	43,444
		Leeds . . .	11	23,835	
		Brockville, town . . .	—	2,449	
London . . .	. . .	Middlesex . . .	17	41,963	46,547
		London, town . . .	—	4,584	
Midland . . .	. . .	Frontenac . . .	15	17,311	
		United { Lennox . . .	3	6,484	
		Kingstown, city . . .	6	13,135	
			—	8,369	
Newcastle . . .	Port Hope . . .	Durham . . .	6	23,346	45,249
	Cobourg . . .	Northumberland . . .	8	24,087	47,433
Ottawa . . .	. . .	Prescott . . .	6	8,663	10,364
		Russell . . .	4	1,701	
Niagara . . .	St. Catherine's . . .	Lincoln . . .	7	17,774	51,325
		Welland . . .	8	17,732	
		Haldimand . . .	9	12,719	
		Niagara, town . . .	—	3,100	
Prince Edward . . .	. . .	Prince Edward . . .	6	18,061	18,061
Simcoe . . .	Picton . . .	Simcoe . . .	23	23,060	23,060
Talbot . . .	. . .	Norfolk . . .	7	15,716	15,716
Victoria . . .	. . .	Hastings . . .	12	23,133	23,133
Wellington . . .	Belleville . . .	Waterloo . . .	27	41,439	41,439
Western . . .	. . .	Essex . . .	8	12,630	27,440
		Kent . . .	21	14,810	723,247

The cities are Toronto, Kingston, and Hamilton; the incorporated towns, Bytown, Cornwall, Brockville, Prescott, Picton, Belleville, Coburg, Port Hope, Niagara, St. Catharines, London, Peterboro, Brantford, and Dundas.

The province of Western Canada has generally been viewed in three great *divisions*,—the (1) Eastern, (2) Central, and (3) Western. The *first* comprises the districts W. and N.W. of Montreal, lying between the St. Lawrence and Ottawa, and N. of the Ottawa. It includes the Eastern, Johnstown, Ottawa, and Bathurst districts. The Eastern district commences at the boundary line separating Eastern from Western Canada, and runs along the St. Lawrence, with part of Lake St. Francis (an expansion of the St. Lawrence) and the Long Sault rapids in front, until it reaches the adjoining district of Johnstown; inland it is bounded by the Ottawa district.

A range of elevated table-land commences at Lochiel and runs diagonally to the township of Matilda, whence it passes into the adjoining district.

The Eastern district is rich, well watered, cultivated, and fertile; some of it has been granted to discharged soldiers, a good deal to the children of New England loyalists, and the Canada Company possesses some lots in it.

The district in the rear of the one just described, and bordering on the S. shore of the Ottawa, from the Rideau river to the St. Lawrence, is termed the Ottawa district; it is but thinly settled; the lands are good, but low and marshy; along the Rideau canal cultivation is progressing, and as civilization increases, those very lands which are now considered useless, marshy soils, will become among the most fertile sections in the country.

The Johnstown district lies along the St. Lawrence to the westward of the Ottawa and Eastern districts; the Rideau canal passes through the centre. The soil is generally good, and it is advantageously situated. The districts on the N., bounded by the Ottawa, are those of Bathurst and Dalhousie.

The townships on the Ottawa, N.W. of Bathurst district, are in great demand: lumberers now go 250 miles beyond Lake Chat; and as the Ottawa has few rapids to the northward, towards its junction with Lake Nipissing, we may command a shorter communication between Montreal and Georgian Bay, and Lake Huron, than we now

have through Lakes Ontario, Erie, and the Detroit. A great part of this district is colonized by highland and lowland Scotchmen, whose prudent thrifty habits admirably qualify them for emigrants.

The next division, as we proceed westward, is the long and extensive tract formerly called the Midland District, but now subdivided into the Prince Edward and other districts. The base or southern extremity of this tract rests on the St. Lawrence and Lake Ontario, in the parallel of 44° N., its northern boundary extends to $46^{\circ} 30'$, and is terminated on the N.E. by the Ottawa river.

The preceding districts form the eastern section of the province, and present generally a moderately elevated table-land, declining towards it numerous water-courses; the forest-timber is large and lofty, and of every variety. The soil, though moist and marshy in many places, is extremely rich, consisting chiefly of a brown clay and yellow loam, admirably adapted to the growth of wheat and every species of grain; the rivers and lakes are extremely numerous; of the former may be mentioned as the most remarkable, the Rideau, Petite Nation, Mississippi, and Madawaska, which have their sources far in the interior, generally to the westward, and which fall into the Ottawa: the Gannanoqui, Raisin, Catarqui, Napanee, Salmon, Moira, and part of the Trent discharge themselves into the Bay of Quinté and the St. Lawrence: these streams, besides fertilizing the lands through which they flow, afford, many of them, convenient inland communications, and turn numerous grist, carding, fulling, and saw-mills.

Besides numerous lesser lakes, there are the Rideau, Gannanoqui, White (Henderson's) Mud, Devil, Indian, Clear, Irish, Loughborough, Mississippi, Olden, Clarendon, Barrie, Stoke, Marmora, Collins, Blunder, Angus, and Ossinicon. There are many roads throughout the section; the principal one is along the St. Lawrence, between Montreal and Kingston, traversing Cornwall and Lancaster, through which a line of stage-coaches run between the two provinces every lawful day, when steam-boats cannot travel. Kingston, the maritime capital of Western Canada, has to the westward the fine Quinté tract, in a prosperous state of cultivation.

Bytown, in Nepean, on the S. bank of the Ottawa, is most picturesquely situate.

Perth is a thriving village in the township of Drummond, on a branch of the Rideau, occupying a central position between the Ottawa and St. Lawrence. There are several other rising settlements.

The second or central division of Upper Canada embraces the large districts formerly called Newcastle and Home, with a frontage of 120 miles along Lake Ontario, in $44^{\circ} 30'$ N. lat., and stretching back northerly to the Ottawa, Nipissing Lake, and French river in $46^{\circ} 30'$ N. lat. By the Act 8 Vic. c. 7, this extensive tract has been separated into several districts. [See map of Western Canada.]

The soil throughout this large district is generally good: and though the population is numerous, compared with other districts, there is yet abundance of room for more settlers. It is well watered by the Rice, Balsam, Trout, and other lakes, and by the Otonabee rivers, part of the Trent, &c. The extensive territory adjoining Newcastle, with its N. W. extremity resting on Georgian Bay (an inlet of Lake Huron) is termed the Home District: it contains the capital of Upper Canada, Toronto (late York).

The central section of Upper Canada does not fall short in fertility, either of the east or west portions of the province: it is well watered, the Nottawasaga, Holland, Musketchébé, Beaver, Talbot, and Black rivers fall into Lake Simcoe; the Credit, Etobicoke, Humber, and Don rivers flow into Lake Ontario. There are excellent roads throughout the section.

The third section of the province, termed the Western, includes the Gore, Niagara, London, Western, and other districts; and, circumscribed as it is by the waters of the great Lakes, Ontario, Erie, and Huron, it may be considered a vast equilateral triangular peninsula, with its base extending from Fort Erie to Cape Hurd, on Lake Huron, measuring 216 miles, and a perpendicular striking the Detroit river at Amherstburgh, of about 195 miles in length, with an almost uniformly level, or slightly undulating surface, except a few solitary eminences, and a ridge of slightly elevated table-land in the Gore and Niagara districts, averaging 100 feet, and at some points approaching to 350 feet in height. The whole tract is alluvial in its formation, consisting chiefly of a stratum of black and sometimes of yellow loam, above which is found, when in a state of nature, a rich and deep vegetable mould. The substratum is a tenacious

grey or blue clay, sometimes appearing at the surface, intermixed with sand. Throughout the country, there is almost a total absence of stones or gravel, within arable depth, but numerous and extensive quarries exist, which furnish abundant supplies for building, &c. The forests are remarkable for the steady growth and the rich foliage of their trees: in several places immense prairies or natural meadows exist, extending for hundreds of miles, and with the vista delightfully relieved by occasional clumps of oak, white pine, and poplar, as if planted by man with a view to ornament. With a delicious climate stretching from 42° to 44° N. latitude, it is not to be wondered at that this section is the favourite of Western or Upper Canada.

The district to the southward of Gore, and termed Niagara, from being bounded to the E. by the river and cataract of that name, is one of the finest and richest tracts in the world, and most eligibly situate in a hight, between the magnificent sheets of water, Erie and Ontario.

The scenery throughout this part of Canada is extremely picturesque. Fort George, or Niagara, is the sea-port (if it may be so called) of the district; the fort is strong, and the neat town all bustle and gaiety, owing to the frequent arrival and departure of steam-boats, sloops, and other vessels.

The London district and its recent subdivisions have the advantage of a great extent of water frontier, along the shores of Lakes Erie and Huron, besides a large portion of the Thames, and the river Ouse on Lake Erie, and Aux Sables and Maitland on Lake Huron. London town is in the heart of a fertile country, on the banks of the fine river Thames, and will no doubt rapidly increase.

About the central part of the north coast of Lake Erie, colonel Talbot founded a settlement which reflects credit on his head and heart. Ever since the year 1802 this benevolent man has persevered in opening the fine country around him to the English emigrant. The Upper Canada Company have some of their land in this district. The scenery around, especially on the river Maitland, is more English-like than that of any other in America.

Extensive roads are now making in every direction, and the London district offers a most eligible spot for the consideration of the intending settler

CHAPTER III.

GEOLOGY, MINERALOGY, SOIL, AND CLIMATE.

IN briefly sketching the leading geological features of our Colonies, I beg to be understood as doing no more than registering such facts and observations as have yet been remarked by those who have made it their study to extend the limited knowledge as yet possessed concerning the surface of our globe. I would further beg to remind my readers, that the geology of a country not only indicates the quality of the soil, but exercises an important influence on the salubrity of the climate.

Following the arrangement adopted in the preceding chapter, I begin with the geology and mineralogy of Lower or Eastern Canada.

There are in America as manifest traces of an universal deluge as on the lofty Himalaya chain: boulder-stones are distributed in vast quantities all over the country; sometimes they are found rounded and piled in heaps of immense height, on extensive horizontal beds of limestone, as if swept there by the action of water; shells of various kinds, especially fresh-water clams, cockles, and periwinkles, are in abundance; of the latter, masses have been found several hundred feet above the level of Lake Ontario. In the vicinity of large rivers, and even in many instances remote from them, *undulating* rocks are seen, exactly similar to those found in the beds of rapids where the channels are waved. The wavy rocks are termed provincially, *ice shoves*. On the shores of the Gulf of St. Lawrence, detached boulder-stones of an enormous size (20 tons weight) are met with; they differ from those found inland, are very hard, of a blackish-grey colour, not veined, but with pointed particles of a brilliant appearance: how they came there it is difficult to judge, the rocks of the shores being composed of a slaty limestone.

The fossil organic remains are numerous, and consist of productæ, terebratulæ, orthoceratites, trilobites, and encrinites; these are found on the surface or upper strata, but rarely below. These records of a former animal existence, distinct from any known in the present day, are intimately blended with the limestone in which they are embedded.

That the whole country has been subjected to some violent convulsion, subsequent to the Deluge, would appear from the singular contortions of the rivers, and the immense chasms in the mountains; from the indications of volcanic eruptions at St. Paul's Bay and north of Quebec; and also from the vast masses of alluvial rocks met with on the surface of the earth, which have the appearance of vitrification. The American continent generally, and the configuration and geology of Western Canada in particular, appear to me to afford indications of having but recently emerged from the ocean, and that at no very distant period of time (comparatively speaking), instead of a continent, there was only a succession of islands and rocks.

So far as we know, the geological structure of Canada exhibits a granitic region, accompanied with calcareous rocks of a soft texture, and in horizontal strata. The prevailing rocks in the Alleghany mountains are granite, which is found generally in vast strata, and sometimes in boulders between the mountains and the shore; graywacke and clay-slate also occur with limestone; various other rocks, usually detached, present themselves. The lower islands of the St. Lawrence are mere inequalities of the vast granitic region which occasionally emerges above the level of the river; the Kamouraska islands, and the Penguins in particular, exhibit this appearance; and in Kamouraska and St. Anne's parishes, large masses of primitive granite rise in sharp conical hills (one is 500 feet high), in some places with smooth sides and scarcely a fissure, in others full of fissures, and clothed with pine-trees which have taken root in them; the whole country appearing as if the St. Lawrence had at a former period entirely covered the land. At St. Roche, the post-road leads for more than a mile under a perpendicular ridge of granite 300 feet high. The banks of the St. Lawrence are in several places composed of a schistous substance in a decaying or mouldering condition, but still in every quarter granite is found in strata more or less inclined to the horizon, but never

parallel with it. In the Gaspé district numerous and beautiful specimens of quartz have been obtained, including a great variety of cornelian, and agate, opal, and jasper: indications of coal have also been traced. The limestone stone formation extends, according to a recent calculation, over 80,000 square miles; the dip is moderate, and the strata of limestone generally undisturbed.

The N. shore of the St. Lawrence from Quebec to its mouth, and round the coast of Labrador, offers a rich field for the mineralogist; much of the coast bordering on the gulf being primitive, or of the earlier formations. According to some observers, the N. coast below the St. Lawrence exhibits trap-rocks, clay-slate, various detached rocks, and granite occasionally; the latter being supposed to prevail in the interior of the country, forming the base of the Labrador mountains and the coast of Quebec. Cape Tourment (30 miles from Quebec) is a round, massive, granite mountain about 1000 feet high. The immediate bed of the fall of Montmorenci is a horizontal shelf of dark grey limestone, of the kind called primitive or crystalline. Except in the bogs or marshes, rocks obtrude on the surface in all quarters, and in many parts there exist deep fissures from 6 inches to 2 feet wide, which appear to have been split by the action of fire, or some volcanic shock. The Indians say these rents occasionally extend several miles in length, about a foot in breadth, and from 40 to 50 feet in depth: and frequently form dangerous pitfalls, being hidden from view by creeping shrubs.

These appearances seem to confirm the following graphic, but scarcely credible account of a terrific earthquake, contained in an old manuscript preserved in the Jesuits' College at Quebec:—"On the 5th of February, 1663, about half-past five o'clock in the evening, a great rushing noise was heard throughout the whole extent of Canada. This noise caused the people to run out of their houses into the streets, as if their habitations had been on fire; but instead of flames or smoke, they were surprised to see the walls reeling backwards and forwards, and the stones moving, as if they were detached from each other. The bells sounded by the repeated shocks. The roofs of the buildings bent down, first on one side and then on the other. The timbers, rafters, and planks cracked. The earth trembled violently, and caused the stakes of the pali-

sades and palings to dance, in a manner that would have been incredible, had we not actually seen it many places. It was at this moment every one ran out of doors. Then were to be seen animals flying in every direction; children crying and screaming in the streets; men and women, seized with affright, stood horror-struck with the dreadful scene before them, unable to move, and ignorant where to fly for refuge from the tottering walls and trembling earth, which threatened every instant to crush them to death, or sink them into a profound or immeasurable abyss. Some threw themselves on their knees in the snow, crossing their breasts and calling on their saints to relieve them from the dangers with which they were surrounded. Others passed the rest of this dreadful night in prayer; for the earthquake ceased not, but continued at short intervals, with a certain undulating impulse, resembling the waves of the ocean; and the same qualmish sensations, or sickness at the stomach was felt during the shocks as is experienced in a vessel at sea.

"The violence of the earthquake was greatest in the forests, where it appeared as if there was a battle raging between the trees; for not only their branches were destroyed, but even their trunks are said to have been detached from their places, and dashed against each other with inconceivable violence and confusion—so much so, that the Indians, in their figurative manner of speaking, declared that all the forests were drunk. The war also seemed to be carried on between the mountains, some of which were torn from their beds and thrown upon others, leaving immense chasms in the places from whence they had issued, and the very trees with which they were covered sunk down, leaving only their tops above the surface of the earth; others were completely overturned, their branches buried in the earth, and the roots only remained above ground. During this general wreck of nature, the ice, upwards of six feet thick, was rent and thrown up in large pieces, and from the openings, in many parts, there issued thick clouds of smoke, or fountains of dirt and sand, which spouted up to a very considerable height. The springs were either choked up, or impregnated with sulphur—many rivers were totally lost; others were diverted from their course, and their waters entirely corrupted. Some of them became yellow, others red, and the great river of St. Lawrence appeared entirely white, as far

down as Tadoussac. This extraordinary phenomenon must astonish those who know the size of the river, and the immense body of water in various parts, which must have required a great abundance of matter to whiten it. They write from Montreal that during the earthquake, they plainly saw the stakes of the picketing, or palisades, jump up as if they had been dancing; and that of two doors in the same room, one opened and the other shut of their own accord; that the chimneys and tops of the houses bent like branches of trees agitated with the wind; that when they went to walk they felt the earth following them, and rising at every step they took, sometimes sticking against the soles of their feet and other things, in a very forcible and surprising manner.

"From Three Rivers they write, that the first shock was the most violent, and commenced with a noise resembling thunder. The houses were agitated in the same manner as the tops of trees during a tempest, with a noise as if fire was crackling in the garrets. The shock lasted half an hour or rather better, though its greatest force was properly not more than a quarter of an hour; and we believe there was not a single shock which did not cause the earth to open either more or less.

"As for the rest, we have remarked, that though this earthquake continued almost without intermission, yet it was not always of an equal violence. Sometimes it was like the pitching of a large vessel which dragged heavily at her anchors; and it was this motion which occasioned many to have a giddiness in their heads, and qualmishness at their stomachs. At other times the motion was hurried and irregular, creating sudden jerks, some of which were extremely violent; but the most common was a slight tremulous motion, which occurred frequently with little noise. Many of the French inhabitants and Indians, who were eye-witnesses to the scene, state, that a great way up the river of Trois Rivières, about eighteen miles from Quebec, the hills which bordered the river on either side, and which were of a prodigious height, were torn from their foundations, and plunged into the river, causing it to change its course, and spread itself over a large tract of land recently cleared; the broken earth mixed with the waters, and for several months changed the colour of the great river St. Lawrence, into which that of Trois Rivières disembogues itself. In the course of this violent convul-

sion of nature, lakes appeared where none ever existed before: mountains were overthrown, swallowed up by the gaping, or precipitated into adjacent rivers, leaving in their places frightful chasms or level plains; falls and rapids were changed into gentle streams, and gentle streams into falls and rapids. Rivers in many parts of the country sought other beds, or totally disappeared. The earth and the mountains were entirely split and rent in innumerable places, creating chasms and precipices whose depths have never yet been ascertained. Such devastation was also occasioned in the woods, that more than a thousand acres in our neighbourhood were completely overturned; and where but a short time before nothing met the eye but one immense forest of trees, now were to be seen extensive cleared lands, apparently cut up by the plough.

"At Tadoussac (about 150 miles below Quebec on the north side) the effect of the earthquake was not less violent than in other places; and such a heavy shower of volcanic ashes fell in that neighbourhood, particularly in the river St. Lawrence, that the waters were as violently agitated as during a tempest. (The Indians say that a vast volcano exists in Labrador.) Near St. Paul's Bay (about 50 miles below Quebec on the north side), a mountain about a quarter of a league in circumference, situated on the shore of the St. Lawrence, was precipitated into the river, but as if it had only made a plunge, it rose from the bottom, and became a small island, forming with the shore a convenient harbour, well sheltered from all winds. Lower down the river, towards Point Alouettes, an entire forest of considerable extent was loosened from the main bank, and slid into the river St. Lawrence, where the trees took fresh root. There are three circumstances, however, which have rendered this extraordinary earthquake particularly remarkable: the first is its duration, it having continued from February to August, that is to say, more than six months almost without intermission! It is true, the shocks were not always equally violent. In several places, as towards the mountains behind Quebec, the thundering noise and trembling motion continued successively for a considerable time. In others, as towards Tadoussac, the shock continued generally for two or three days at a time with much violence.

"The second circumstance relates to the extent of this earthquake, which we believe

was universal throughout the whole of New France, for we learn that it was felt from l' Isle Persée and Gaspé, which are situated at the mouth of the St. Lawrence, to beyond Montreal, as also in New England, Acadia, and other places more remote. As far as it has come to our knowledge, this earthquake extended more than 600 miles in length, and about 300 in breadth. Hence, 180,000 square miles of land were convulsed in the same day, and at the same moment.

"The third circumstance, which appears the most remarkable of all, regards the extraordinary protection of Divine Providence, which has been extended to us and our habitations; for we have seen near us the large openings and chasms which the earthquake occasioned, and the prodigious extent of country which has been either totally lost or hideously convulsed, without our losing either man, woman, or child, or even having a hair of their heads touched."

The extensive Ottawa region has been imperfectly explored. Mr. T. S. Hunt, chemist and mineralogist to the Provincial and Geological Survey, in an excellent report on the rocks along the Ottawa, dated April, 1848, says, that the limestone there is invariably highly crystalline, and sometimes very coarse-grained in its structure; at other times its texture is very fine, forming what is termed saccharoidal limestone; and occasionally the grain is so fine, as to yield a marble fit for the artist. The crystalline limestones of the Ottawa underlie unconformably the silurian rocks of the country, and are interstratified with sienitic gneiss. Near Perth, Dr. Wilson, who has enriched the mineralogical knowledge of the province, has discovered a locality of *apatite*, or phosphate of lime. It is found in a bed of coarse crystalline limestone, tinged of a flesh-red, and often embracing grains of pyroxene. The crystals are from half to one inch diameter. One crystal was found 12 inches in length and $9\frac{1}{2}$ in circumference. The *apatite* is translucent, of a delicate celandine green colour; the angles of the crystals are invariably rounded, and the terminations rarely distinct—looking, indeed, as if they had been half fused after their formation. The value of phosphate of lime in the shape of guano and bone powder is now fully recognized; several plants, especially wheat, largely extract it from the soil, and thus impoverish the land. Canada possesses in it an almost inexhaustible supply

of a fertilizing product for the exhausted wheat lands in the seigneuries.

Mineral corundum—the emery of the East Indies, so useful for polishing gems—is found in the neighbourhood of the Ottawa, as is also heavy spar, or sulphate of barytes in gneiss, either massive or in thin bladed crystals. This is very extensively used in Europe and America to mix with white lead, and also as a paint, under the name of permanent white. The crude material is worth from 8 to 10 dollars per ton. Various other semi-metallic products, and also copper, are found in this locality.

There are several "saline," "sulphuric," "sour," "gas," and warm and cold springs in the province. The Charlotteville sulphur spring yields 26·8 cubic inches of sulphuretted hydrogen gas to the gallon of water, while the strongest of the celebrated Harrowgate springs yields but 14 cubic inches. The "Tuscarora," or "sour" spring, is situated in the county Wentworth, Canada West, 9 miles S. of Brantford, and 3 miles S. of the bank of the Grand river. The water is of a very unusual character,—it is acid, sulphureous, and emits gas; sulphuric acid is the predominant ingredient.

The various mineralogical substances found in Eastern Canada, and capable of application to useful purposes, are the magnetic and specular oxides of iron, bog iron ore, and iron ochre, chromic iron, wad or bog manganese ore, copper ore, gold, granite, and other descriptions of stone, suited for building; for mill and whetstones, flagstones, roofing slates, marble serpentine, soapstones, magnesite, dolomite, and common limestone, brick and potter's clay, and shellmarl. The only gold yet found was obtained in the vicinity of Sherbrooke; but the same general geological formation being traceable from Gaspé, through the United States to Georgia, the Carolinas, and Virginia, and even to Mexico,—it is not improbable that this precious metal may yet be found extensively in Eastern Canada.

There are inexhaustible quantities of fine granite in various localities; it presents an even mixture of translucent white quartz and opaque white feldspar, with a brownish-black mica, sparingly, but equally disseminated: it is capable of being readily split with wedges into rectangular blocks.

Shellmarl, so valuable for manure, is found in different places: on the land of Mr. Martin, to the east of Stanstead Plains, there is a bed of comminuted fresh water

shells, of 50 to 100 acres in extent. In another place the fresh water shells have a depth of several feet, and rest on a deposit of marine shells of the tertiary age. The soapstone, which is the same material as French chalk, mixed with oil, is now used for house painting. A decomposed talcose slate forms a white-wash instead of lime, and produces a dirty white, or light ash-grey colour. Soapstone is also used as a lining for ovens, furnaces, and fireplaces; and from its long retention of heat, a piece of soapstone heated in the fire, and wrapped in a blanket, is found useful in long Canadian winter journeys.

A bed of the silicious rock termed jasper, 6 feet in thickness, exists at Sherbrooke; it is cut into boxes, chimney ornaments, knife handles, &c. Large blocks of serpentine, resembling the celebrated *verd antique*, are found near Orford.

The geology of the country around the great lakes has been investigated by several distinguished English and American explorers.

Lake Superior.—The whole S. coast of this vast inland sea is stated by Mr. Schoolcraft, an American gentleman who formed part of a government expedition from New York, to be a secondary sandstone, through which the granite on which it rests, occasionally appears; chalcedony, cornelian, jasper, opal, agate, sardonyx, zeolith, and serpentine (all silicious except the last two), with iron, lead, and copper, are found imbedded in it. The sand hills W. of the Grand Marais, present to the lake, for 9 miles, a steep acclivity 300 feet high, composed of light yellow silicious sand, in 3 layers, 150, 80, and 70 feet thick; the last-mentioned uppermost, and like the lowest, pure, while the middle bed has many pebbles of granite, limestone, hornblende, and quartz. By the subsidence of the waters of Lakes Superior and Huron, occasioned, Mr. Lyell thinks, by the partial destruction of their barriers at some unknown period, beds of sand, 150 feet thick, are exposed; below which are seen beds of clay, enclosing shells belonging to fish of the very species which now inhabit the lakes.

Dr. Bigsby, who minutely examined Lake Superior, observed, that a red sandstone for the most part horizontal, predominates on the S. shore, resting in places on granite. Amygdaloid occupies a very large tract in the N. stretching from Cape Verd to the Grand Portage, profusely intermingled with

argillaceous and other porphyries, sienite, trappose-greenstone, sandstone, and conglomerates. Trappose-greenstone is the prevailing rock from Thunder Mountain westward, and gives rise to the pilastered precipices in the vicinity of Fort William. Part of the N. and E. shore is the seat of older formations, viz., sienite, stratified greenstone, more or less chloritic, and alternating with vast beds of granite, the general direction E., with a perpendicular dip.

Great quantities of the older shell limestone are found strewn in rolled masses on the beach, from Point Marmozee to Grand Portage; its organic remains are trilobites, orthoceratites, encrinites, productæ, madreporæ, terebratulæ, &c. At Michipicoton Bay was found a loose mass of pitchstone porphyry, the opposite angle being trappose.

Lake Huron.—The almost uniformly level shores of Lake Huron present few objects of interest to the geologist: secondary limestone, filled with the usual reliquæ, constitutes the great mass of structure along the coast. Here and there are found detached blocks of granite, and other primitive rocks; the only simple minerals found by Mr. Schoolcraft were pieces of chalcedony in one place, and in another, crystals of staurolite. Around Saganaw Bay the primitive formation appears to approach nearer the surface; the secondary limestone then gives place to sandstone, which disintegrates, and forms sand banks and beaches, as on the sea shore.

With the exception of spots of sand opposite the mouth of Spanish and other rivers, the shore N. of Lake Huron is composed of naked rocks; but on the S.E., and at the naval station of Penetanguishine, there are several undulating alluvial platforms some hundred feet high, rounded into knolls, intersected by water-courses, and extending to the N.W. shores of Lake Simcoe, and, in fact, to Lakes Erie and Ontario.

Mr. A. Murray, in his elaborate geological survey of the shores of Lake Huron, says, that the older groups he observed, consist, firstly, of a metamorphic series, composed of granitic and sienitic rocks, in the forms of gneiss, mica slate, and hornblende slate; and, secondly, of a stratified series, composed of quartz rock, or sandstones, or conglomerates, shales, and limestones, with interposed beds of greenstone; and of the fossiliferous groups following these, six for-

mations are met with, which, in the New York nomenclature, come under the following designations:—1. Potsdam sandstone, 40 feet; 2. Trenton limestone, 320 feet; 3. Utica slates, 50 feet; 4. Lorraine shales, 200 feet; 5. Medina sandstone, 103 feet; 6. Niagara limestones, including the Clinton group, 560 feet; total, 1,273 feet. At Cabot's head the thick bedded coralline limestone is 228 feet deep.

The Niagara limestones, as they are termed, extend over a large part of the southern portion of Drummond Island, and nearly the whole of Cockburn Island—eastward through the Grand Manatoulin. They cap the cliffs at Cabot's head, and can be traced thence to the southward. The fossils met with peculiar to the Niagara limestone are chiefly corals; some of the most massive beds appear to be entirely composed of coral of the most elaborate structure; one fallen mass was observed at Cabot's head, which appeared to be all coral, measuring 10 yards square on the surface, with an average thickness of 5 feet. Bivalve shells are met with abundantly, and univalves occasionally.

Lakes Huron, Michigan, and Superior, have evidently been at one time considerably higher than they are at the present day, and it would appear (as has been previously remarked) that the subsidence of their waters has not been effected by slow drainage, but by the repeated destruction of their barriers: indeed, these three lakes have evidently at some remote period formed a single body of water, as is evinced by their comparatively low dividing ridge, by the existence, in Batchewine Bay, of numerous rolled masses which are *in situ* in the N.W. parts of Lake Huron, and, among many other indications, by the very large boulders of the Huggewong granite, and the greenstone of Michipicoton, strewn in company with rocks of Lake Huron, over the Portage of St. Mary's; their original situation being at least 100 miles N. from where they are placed at present. Great alluvial beds of fresh water shells are found in the E. of Lake Huron, whose appearance argues them to be of post-diluvian formation, effected while the waters were still of immense height and extent.

Lake St. Clair.—The entrance of the Lake of St. Clair affords the first indication of the change in the geological formation, observed as we proceed through the lakes; pebbles of granite, hornblende rock, and silicious sand

are seen on the edge of the water, washed out from below the alluvion of the banks. According to the editor of an able American Review, this is probably very near the limits where the materials of the primitive formation show themselves beneath the secondary, nothing of them being seen on the American side of Lake Erie; but around St. Clair, masses of granite, mica slate, and quartz, are found in abundance.

Lake Erie.—The chasm, at Niagara Falls, affords a clear indication of the geology of the country. The different strata are—first, limestone—next, fragile slate—and lastly, sandstone. The uppermost and lowest of these compose the great secondary formation of a part of Canada, and nearly the whole of the United States, occupying the entire basin of the Mississippi, and extending from it between the lakes and the Alleghany ridge of mountains, as far eastward as the Mohawk, between which the slate is often interposed, as at Niagara, and throughout the State of New York generally. At Niagara, the stratum of slate is nearly 40 feet thick, and almost as fragile as shale, crumbling so much as to sink the superincumbent limestone; and thus verifying to some extent, the opinion that a retrocession of the falls has been going on for ages.

Lake Ontario.—Limestone, resting on granite. The rocks about Kingston are usually a limestone of very compact structure, and light blueish-grey colour—a fracture often approaching the conchoidal, a slight degree of translucency on a thin edge; and after percussion, emitting the odour of flint, rather than that of bitumen. The lowermost limestones are in general more silicious than those above them; and so frequently is this the case, that, in some places, a conglomerated character is given to the rock by the intrusion of pieces of quartz or hornstone. It is worthy of remark, that both angular and rounded masses of felspar rock, which usually underlies limestone, (or, if absent, is supplied by a substratum in which hornblende predominates) are imbedded and isolated in the limestone, demonstrating the latter to have been at one time in a state of fluidity.

The limestone formation is stratified horizontally, its dip being greatest when nearest to the elder rock on which it reposes, and by which it would appear to have been upraised, subsequently to the solidification of its strata; the thickness of which, like the

depth of the soil, varies from a few feet to a few inches. Shale occurs as amongst most limestones; and, in some places so intimately blended with the latter, as to cause it to fall to pieces on exposure to the atmosphere. The minerals as yet noticed, in this formation, are chert, or hornstone, basanite, chlorite, calcareous spar, barytes, sulphate of strontian, sulphuret of iron, and sulphuret of zinc. Pure granite is seldom or never found.

THE SOILS of Upper or Western Canada are various; that which predominates, is composed of brown clay and loam, with different proportions of marl intermixed; this compound soil prevails principally in the fertile country between the St. Lawrence and Ottawa; towards the N. shore of Lake Ontario it is more clayey, and extremely productive. The substratum throughout these districts is a bed of horizontal limestone, which in some places rises to the surface. The colour is of different shades of blue, interspersed with grains of white quartz. It is used for building, and is manufactured into excellent lime by an easy process of calcination; and greatly enriches and invigorates the soil when sprinkled over it. The limestone of Niagara differs from the foregoing in colour and quality, being grey, and not so easily calcined into lime. The Newcastle district lying between the upper section of the Ottawa and the St. Lawrence, is a rich black mould; which also prevails throughout the East Riding of York, and on the banks of the Ouse, or Grand River, and the Thames.

At Toronto the soil is fertile, and its alluvial nature is clearly demonstrated by the scarcity of stones for common use, which is also the case in some townships bordering Lakes Erie, St. Clair, and the Detroit. A light sandy soil predominates round the head of Lake Ontario.

The quantity of good soil in Canada, compared with the extent of the country, is equal to that of any part of the globe; and there yet remains location for several millions of the human race. The best lands are those on which the *hardest* timber is found—such as oak, maple, beech, elm, black-walnut, &c., though bass-wood when of luxuriant growth, and pine when large, clean, and tall, also indicate good land. Many of the *cedar swamps*, where the cedars are not stunted, and mingled with ash of a large growth, contain a very rich soil, and are calculated to form the finest hemp

grounds in the world. So great is the fertility of the soil in Canada, that 50 bushels of wheat per acre are frequently produced on a farm, where the stumps of trees, which probably occupy an eighth of the surface, have not been eradicated—some instances of 60 bushels per acre occur, and near York, in Upper Canada, 100 *bushels of wheat were obtained from a single acre!* In some districts wheat has been raised successively on the same ground for 20 years without manure.

The soil on the promontory where Quebec stands, is light and sandy in some parts, in others it is a mixture of loam and clay; beneath the soil a black, silicious slaty rock is everywhere met with, resting generally on a bed of granite. Above Richelieu Rapids, where the mountains commence retreating to the S. and N., the greater part of the soil of the low lands is apparently of alluvial formation, consisting of a light and loose blackish earth, ten or twelve inches in depth, lying on a stratum of cold clay.

The soil of Montreal island is generally alluvial, consisting in many places of light sand and loam, and in others of a stiff clay, on a horizontal stratum of limestone with animal remains: the substratum granite being intersected by black slaty rock, similar to that of Quebec.

Along the Ottawa there is a great extent of alluvial soil, and many new districts of fertile land are constantly brought into view.

MINERALOGY.—Among the mountains to the W. of the St. Lawrence, have been obtained iron felspar, hornblende, native iron ore, granite (white, grey and red), and a kind of stone very common in Canada, called limestone granite, it being limestone that calcines to powder, yet when fractured resembles granite: marble is in abundance, and plumbago of the finest quality. The iron mines of St. Maurice have long been celebrated, and the metal prepared with wood is considered equal if not superior to Swedish. Canada is rich in copper, lead, tin, cobalt, titanium, molybdenum, manganese, zinc ore, &c.

Copper abounds in various parts of the country; some large specimens have been found in the angle between Lakes Superior and Michigan. At the Coppermine river (Ontanagon 300 miles from the Sault de Ste. Marie), this metal, in a pure and malleable state, lies in connexion with a body

of serpentine rock, which it almost completely overlays: it is also disseminated in masses and grains throughout the substance of the rock. Henry and others speak of a rock of pure copper, from which the former cut off an 100 lbs. weight. Mr. Schoolcraft examined the remainder of the mass in 1820, and found it of irregular shape—in its greatest length 3 feet 8 inches, greatest breadth 3 feet 4 inches, making about 11 cubic feet, and containing, of metallic matter, about 2,200 lbs.; but there were many marks of chisels and axes upon it, as if a great deal had been carried off. The surface of the block, unlike that of most metals which have been long exposed to the atmosphere, is of metallic brilliancy.

The beautiful spar, peculiar to Labrador, whence it derives its name, has long been celebrated; some specimens are of an ultramarine, or brilliant sky-blue colour, others of a greenish-yellow, of a red, and of a fine pearly grey tint. Marble of excellent quality and of different hues, white, green, and variegated, is found in several parts of the country; and limestone, so useful to the agriculturist, almost everywhere abounds. According to the geological survey in 1847-48, it appears that the quantity of iron in the province is likely to prove very considerable. Considering the valuable deposits of this mineral already known in Marmora, Madoc, Bedford, Hull, &c., and the deflection of the magnet over regions of great extent, it is not unreasonable to suppose that provincial beds may exist of equal consequence with those of New York State.

The deposit of gypsiferous shale, so valuable for its gypsum salt, hydraulic lime, occupies nearly all that neck of land which separates Lake Ontario from Lake Erie, skirts the shore of the former lake through Niagara county, passes by Cayuga, York, and Paris, near Galt, on the Grand River, and turns northward towards Cabot's head on Lake Huron. The thickness of this deposit is estimated at 300 feet. About 3½ miles below Cayuga, there is a hard solid bed of water lime, 30 feet thick. The gypsum, it appears, is deposited in detached masses, almost invariably assuming more or less of a conical shape. Adjacent to the gypsum, and indeed sometimes intermixed with it, are vast quantities of water lime. The beds worked in York and Paris are extensive, and produce excellent gypsum. This part of Canada, it is asserted, extending from Galt to Cayuga, cannot fail

to become, in time, from the mineral contents of the subsoil, one of the most valuable parts of the province.

An interesting discovery has been made of the existence of lithographic stone at Rama, on Lake Simcoe. It is of the best quality, and the supply is very large, which is the more satisfactory, inasmuch as this stone is only to be found in one other place in the world—Solenhofen on the Danube—and has hitherto commanded a monopoly price.

I have already adverted to the native copper found on the banks of Lake Superior, on the Coppermine river; iron is abundant in various parts of Western Canada, particularly at Charlotteville, about eight miles from Lake Erie; it is of that description which is denominated shot ore, a medium between what is called mountain and bog ore; the metal made is of a superior quality. The Marmora Iron works, about 32 miles north of the Bay of Quinté, on the river Trent, which are situated on an extensive white rocky flat, bare of stones, and were apparently in former times the bottom of a river; exhibit like many other parts of Canada, different ridges and water courses; the iron ore is extraordinarily rich, some specimens yielding 92 per cent.; it is found on the surface, requiring only to be raised—the requisite smelting materials of limestone and pine fuel abound in the vicinity. Magnetic oxyde, red oxyde, mountain, or lake ore, and other varieties are met with at this place. Black lead is found also at Marmora, on the shores of the Gannanoqui lake, and in the eastern division of Western Canada, where it is said some silver mines are known to the Indians; small specimens of a metal like silver have been found at Marmora, and titanium at Lake Superior.

Mr. Murray is of opinion that the N. shore of Lake Huron is a region of great mineral importance. Although the whole district is covered by a dense forest, still in its original wild condition several copper lodes have been discovered—some of decided value, others of considerable promise. The "Bruce mines," now being worked, on the main shore between French and Palladeau islands, 10 miles west of Thessalon Point, are very valuable.

Two mineral springs flow at Scarborough, 15 miles E. of Toronto. Above the Niagara Falls is a phenomenon, termed the Burning Spring, the water of which is in a constant state of ebullition, black, warm, and emit-

ting a portion of sulphuretted hydrogen gas sufficient to light a mill, which stood at the place, the gas yielding, when concentrated in a tube, a light and beautiful flame; in winter the water loses its burning properties. At the head of Lake Ontario there are several fountains, strongly impregnated with sulphur; the latter is found in substance collected into solid lumps of brimstone. The Indians speak of volcanoes in several parts of the province, particularly towards the Chippewa hunting-grounds.

Salt *licks* (springs) are numerous; one at Salt Fleet yielded a barrel of salt a day. Near the Moravian villages, on the river Thames, there are springs of petroleum, and a bituminous substance appears on several of the waters in the north-west country: on the above named river there is a quarry of soft free stone, of a dark colour, which the Indians hew out with their axes: it will not endure the heat of fire, but is useful for building. Near the Gannanoqui Lake is found a soft-soap stone, with a smooth oily surface. Gypsum is obtained in large quantities and of excellent quality on the Grand, or Ouse river. Potter's and pipe clay are frequent, and yellow ochre is occasionally met with.

Mr. Derottermund, chemist to the government geological survey of Canada, says that the waters of the St. Lawrence which flow past Montreal, are of two kinds, the one coasting along the left side of the river appertains to the Ottawa, and is of a brown colour, the other, flowing opposite to the city, comes from the great lakes and is of a fine blue colour. These waters run together for several leagues without intermingling, as may be observed in the Lake of Geneva, where the Rhône preserves in its passage through the lake its peculiar blue colour. The waters of both the St. Lawrence and the Ottawa, are very pure, differing from distilled water only by '002 or '003. The different specific gravity of the two waters may possibly be the cause of their not intermingling; both contain chlorides, sulphates, and carbonates, with bases of lime and of magnesia, but the St. Lawrence water holds in solution carbonate of lime, and is not therefore so well adapted for culinary purposes. The brown colour of the Ottawa water may be owing to the presence of a very minute quantity of marl or loam, or the two rivers being impregnated differently with saline matter, the rays of light are reflected differently, and the effect is the

more striking when the two waters are in contact and in large quantities.

Water taken from the river opposite Montreal, in July, 1845, Mr. Derottermund obtained the following comparison:—

	St. Lawrence.	Ottawa.
	grs.	grs.
Sulphate of Magnesia . . .	0.62	0.69
Chloride of Calcium . . .	0.38	0.60
Carbonate of Magnesia . . .	0.27	1.07
Carbonate of Lime . . .	—	0.017
Silica . . .	0.31	0.50
	1.53	2.877

There is a great difference observable in the transparence and purity of the waters of the great lakes. Those of the Ontario, Erie, and the southern parts of Michigan, are like other lake waters; but Huron, and the northern part of Lake Michigan, and it is said also Superior, contain waters of a degree of purity and clearness such as is seldom to be found elsewhere. The Huron waters are so transparent that the rays of the sun are said to pass through them as through the cloudless atmosphere, without meeting with any solid matter in suspense to obstruct or draw off their caloric. Hence the water on the surface, and that drawn from a depth of 200 fathoms, has been found of precisely the same temperature, viz. 56°. Whether the water in the lowest depths of lakes Superior and Ontario be salt or fresh, we cannot ascertain; for the greater density of the former may keep it always below, or there may be a communication with the ocean.

CLIMATE.—The temperature of the numerous regions of this vast country necessarily vary, according to their distance from the equator, and the contiguity of mountains and forests; but generally speaking the clear blue sky, the absence of fogs, and the consequent peculiar elasticity of animal fibre, indicate the salubrity of British North America. In Eastern Canada, the greater severity of the winter, is owing partly to its latitudinal position, and partly to the north eastern range of lofty mountains. In the more northern part of the province, the snow commences in November, but seldom lies many days on the ground before December, when the whole country is covered by it for several feet deep, nor does it entirely disappear until the beginning of May. The frost during this period is generally intense, with N.W. winds and clear atmosphere, during the greater part of the winter; but on a change of wind to the

southward and eastward, the weather becomes overcast, the atmosphere damp, with occasional dense fogs, and falls of snow, accompanied by a considerable rise in the thermometer, which usually ranges, during the months of December, January, February, and March, from 32° to 25° below zero, Fah. In 1790, mercury froze at Quebec. The temperature is often 60° Fah. below the freezing point—20° is the average. The extreme cold may be imagined by the effect of the following experiment; bomb-shells were nearly filled with water, an iron plug was then driven into the fuse-hole by a sledge-hammer; when the water froze, the plug was forced out with a loud report, and was thrown with great velocity to a considerable distance; a plug 2½ oz. weight was thrown 415 yards, the elevation of the fuse axis being an angle of 45. When a plug with notched springs, permitting its expansion within the shell, was used, the shell nevertheless burst. Rocks, particularly those of the calcareous, schistous, and sand-stone order, are often rent as if with gunpowder, by the expansive force of intense frost. During the cold frosty nights, the woods creak as if 10,000 *bucherons* were at work among them.

As winter advances, one snow storm succeeds another till the face of the whole country is changed, every particle of ground is covered, the trees alone remaining visible, and the mighty river St. Lawrence is arrested in its course. The feathered tribes take flight, even the hardy crow retreats, and few quadrupeds are to be seen: some, like the bear, remaining in a torpid state, and others, like the hare, change their colour to pure white.

Instead of the pleasing variety which a Canadian summer presents, enabling the traveller to trace the course of noble rivers—to contemplate the fall of mighty cataracts or the busy hum of commerce in the passing vessels on the moving waters—the fine tints of the forests, and the auburn tinge of the ripening corn—the whistle of the plough-boy, and the lowing of the tended kine—nothing is now to be seen but one unvaried surface; no rivers, no ships, no animals—all one uniform, unbroken plain of snow, the average depth of which, unless where snow-storms or drifts have accumulated, is about 30 inches.

From Quebec to Montreal, the St. Lawrence ceases to be navigable, and serves as a road for sleighs and carriages. The carriage varies in shape according to the fancy of

the owner; sometimes like that of a phaeton, gig, chariot, or family coach: the body is placed on what are called *runners*, which resemble in form the irons of a pair of skates, rising up in front in the same manner, and answering somewhat the same purpose. The *high runners* are about eighteen inches long; the carriage is generally elevated about twelve inches above the snow, over which when level it glides with great ease, without sinking deep: but when *cahots* (from *cahoter*, to *jolt*, a word denoting narrow ridges with deep furrows), are formed in the snow, the motion is like rowing in a boat against a head sea, producing a sensation in one unaccustomed to it, something like sea-sickness. The carriage is often mounted with silver, and ornamented with expensive furs. The *traineaux*, *burline*, *cutter*, and *sleigh*, are all varieties of the carriage.

The dress of the Canadian now undergoes a complete change; the hat and *bonnet-rouge* are thrown aside, and fur caps, fur cloaks, fur gloves, are put in requisition, with worsted hose over as well as under the boots; those who take exercise on foot, use snow shoes, or *moccassins*, which are made of a kind of network, fixed on a frame, and shaped like a boy's paper kite, about 2 feet long, and 18 inches broad; these cover so much of the surface that even when the snow is softest the wearer sinks in it but a very few inches.

While the severity of the season is thus guarded against by the Canadians when out of doors, their habitations are also secured against the destructive power of intense cold. The walls of the houses are usually plastered on the outside, to preserve the stones from moisture, which during extreme frost, renders them liable to split; and the apartments are heated with stoves, which keep the temperature at a higher and more uniform rate than is done by our English fire-places.

And here it may be observed, that the result of intense cold (such as is felt in Canada is, if not guarded against, similar to that of intense heat; with this difference, that it is easier to guard against the effects of the one in North America than of the other in India. A cold iron during a Canadian winter, when tightly grasped, blisters and burns nearly in the same manner as a hot iron. The principle in both instances is alike—in the former, the rapidity with which the caloric or vital heat of the body passes from the hand into the cold iron,

destroys the continuous and organic structure of the part; in the latter, the caloric passes so rapidly from the hot *iron* into the hand, as to produce the same effect: heat, in both cases, being the cause; its passing into the body *from* the iron, or *into* the iron *from* the body, being equally injurious. For a similar reason the incautious traveller, in Canada, is *burnt* in the face by a very cold wind, and experiences the same sensation as if exposed to the blast of an eastern sirocco. Milton well describes the effects of extreme cold in the following lines:—

"Beyond this flood, a frozen continent
Lies, dark and wild, beat with perpetual storms
Of whirlwind and dire hail, which, on firm land
Thaws not, but gathers heap, and ruin seems
Of ancient pile: all else deep snow and ice;
A gulf profound as that Serbonian bog
Betwixt Damiatra and Mount Casius old,
Where armies whole have sunk: the parching air
Burns froze, (frozen) and cold performs the effect
of fire."
PARADISE LOST, Book ii.

We also find in Virgil Georg. I. 93—

—— Boreæ penetrabile frigus adurat.

Dogs become mad at Quebec in December and January when the cold is greatest; extreme cold and extreme heat tending equally to the propagation of hydrophobia. The term *frost-bitten* denotes the effect produced by cold, accompanied by a sharp biting wind. In such weather persons are liable to have the nose, toes, fingers, ears, or those parts where the circulation of the blood is scanty and slow, *frost-bitten*, without being made aware of the change by their own sensations; and it not unfrequently happens that they are first informed of their misfortune by a passing stranger, who observes the nose, for instance, becoming quite *white*, while the rest of the face is very red. In such a predicament, it is at first startling to see an utter stranger running up to you with a handful of snow, calling out "*your nose, sir: your nose is frost-bitten;*" and without further ceremony, rubbing without mercy at your proboscis. If *snow* be well rubbed in in due time, there is a chance of saving the most prominent feature of the face: if not, or if *heat* be applied, not only is the skin destroyed, but the nose, and a great part of the adjacent surface, are irrecoverably lost.

The inevitable result of the long-continued action of snow or cold on the animal frame is death, and that of the most pleasing kind;—at first a pleasing sensation of anguish is felt, to this succeeds an oppressive drowsiness which, if indulged in, is

surely fatal; the sufferer passing, impassible and unconscious, from the slumber of life into the cold sleep of death; the countenance remaining as calm and placid as if the pulse of existence still vibrated through the frame, while voluntary muscular power was suspended, under the temporary oblivion of sound repose. The pleasurable moments which intervene between the states of consciousness and unconsciousness on approaching sleep, and the indistinct visions and indescribable emotions then experienced afford us some idea of the mode in which the soporific influence of frost softens the iron grasp of the grim tyrant. It must not, however, be supposed that the severity of the winter is an obstacle to all out-door amusements, though it stops the navigation of the rivers and the cultivation of the soil; on the contrary, winter in Canada is the season of joy and pleasure: the cares of business are laid aside, and all classes and ranks indulge in a general carnival, as some amends for the toil undergone during the summer months. The sleigh or carriage of the proud *seigneur*, or humble *habitant*, is got ready all over the country—riding abroad on business or pleasure—visiting between friends, neighbours, and relatives commences—city and town balls, pic-nic country parties, where each guest brings his dish, are quite the rage; and, after dining, dancing, supping, and dancing again, the wintry morning dawn is ushered in, while the festive glee is yet at its height, and a violent snow-storm often blockades the *picnickers*, until broad daylight enables them to proceed in their carriages towards home—over the ice-bound rivers and waves of snow, the inconveniences of the moment being viewed as a zest to the more staid and fashionable *routes* of Quebec or Montreal.

Travelling over frozen rivers or lakes is, however, not unattended with real danger; the sleigh, its horses and passengers, having been not unfrequently instantly engulfed, and sucked beneath the ice; there being no warning of the danger until the horses are submerged, dragging the carriage and its inmates after them. Fortunately, the weak or thin places are in general of no great extent; and when the horses are found to be sinking, the passengers instantly leap out on the strong ice, seize the ropes, which, with a running noose, are placed ready for such an emergency on every sleigh horse's neck, and, by sheer pulling, the animal is partially strangled in order to save his life; for if the

horse be allowed to kick and struggle, it only serves to injure and sink him: as soon, however, as the noose is drawn tight, his breathing is momentarily checked, strangulation takes place, the animal becomes motionless, rises to the surface, floats on one side, and is then drawn out on the strong ice, when, the noose being loosened, respiration recommences, and the horse is on his feet carrying away again in a few minutes as briskly as ever. This singular operation has been known to be performed two or three times a day on the same horse. The traveller on the frozen rivers, but more especially on the frozen lakes, also incurs great danger from the large rifts or openings which run from one side of the lake to the other, from one to six feet broad, causing, at some distance from the crack, a shelving up of the ice to the height of several feet, in proportion to the breadth of the fissure. The sleigh drivers, when they see no other mode of passing, or of escape, make the the horses endeavour to leap the chink at full gallop, with the sleigh behind them, at the imminent risk of being engulfed in the lake.

A snow-storm is another source of danger to the American traveller; and indeed a snow-storm on land is as terrific as a hurricane at sea, while this peculiar disadvantage attends the traveller on *terra firma*, that he has no land-marks, to supply the place of the mariner's compass, and guide him in his trackless path; the excited intellect becomes rapidly bewildered, memory fails, and a road often travelled, and in calmer moments well known, is utterly lost in the remembrance of the unfortunate traveller. The heavily-falling snow is accompanied by a violent gale of wind, which drifts the lighter particles along with great velocity, forming in its progress innumerable eddies according to the inequalities of the surface, and raising as it were light clouds from the earth, which obscure and confuse every thing. This drift, which the Canadians call *La Poudre*, consists of minute but intensely frozen particles of snow, which, whirled by the impetuosity of the hurricane, force their way through the smallest window or door chink, leaving large heaps of snow on the floor in a few hours, as we sometimes experience on a much smaller scale in England.

The horses in the sleighs or carriages have small bells hung on the harness, the sound of which is cheering to the animal as well as to his master: in a frosty night, sound is

rapidly and extensively conveyed to an anxious and listening ear, and the tinkle of the distant sleigh bell may well be thought musical.

Below Quebec the St. Lawrence is not frozen over, but the navigation is impeded by the large masses of ice which are floated down the river from the upper districts, and kept in motion by the combined action of the current at the narrows opposite Quebec, and the diurnal influence of the ocean tides.

Crossing the river at these times, though a dangerous enterprise, is one constantly undertaken. The period chosen is high water, when the large masses of ice are almost stationary; the canoe is then launched, the people being provided with ropes, boat-hooks and paddles; a sheet of ice being reached the passengers jump on it, drawing the canoe after them, until they come to another opening, when they again launch their fragile conveyance, which is pushed towards another sheet of ice, and so on, the greatest dexterity being necessary to avoid being crushed to pieces, canoe and all, between huge masses of ice.

At distant intervals, about once in ten years, the St. Lawrence is completely frozen across at Quebec, when a grand rejoicing or jubilee takes place; booths are erected; sleigh-racing, skating, driving, &c., are performed on a smooth sheet of ice, which for eight miles appears like a mirror, and the *pont* (as it is termed) enables the country people from the opposite side to bring their provisions, &c., to market in carriages without the difficulty and danger of crossing the half-frozen river in their slight canoes.

As soon as the winter sets in, the farmer is obliged to house all his cattle, sheep, and poultry; those destined for winter use are killed before they lose any of the fat acquired during the summer and autumn. No salt is necessary to preserve them; they are exposed to the frost for a short time, when they become as hard as ice, and in this state, after being packed in casks or boxes with snow, are preserved from the external air. At the end of four or five months they are perfectly good, and are thawed when required for use with *cold* water—*warm* water would render the provisions quite useless. Fish is also preserved in a similar manner, and, it is stated, may be restored to life four or five days after, if immediately frozen when taken out of the water.

During the month of April, the influence of the sun on the ice and snow begins to be

felt; in the middle of April spring commences at Montreal; and three weeks after, the snow has all disappeared in the neighbourhood of Quebec; and the ice which had been accumulating in the great lakes and rivers connected with the St. Lawrence, rushes down in vast masses towards the ocean, which again dashes it inland with the impetuosity of the gulf tides, presenting an extraordinary scene: sometimes the St. Lawrence is choked up from bank to bank with masses of ice from 4 to 500 yards in diameter; the sea-tide and land-current forces these on one another, and break them into small pieces, forming fantastic groups of figures, high above the surface of the river. The navigation of the river is not said to be completely open until the second week in May, when the ice-masses have all disappeared; vessels attempting to get out of, or to enter the St. Lawrence while the ice is forming or disappearing, are frequently lost, by being embayed, and crushed to pieces during a severe storm, when the running rigging, and even the rudder become immovable. It is worthy of notice, that so large a river as the St. Lawrence, in lat. 47° N., should be shut up with ice as early, and remain as long closed (5 months) as the comparatively small river Neva, in lat. 60° N.

A singular meteorological phenomenon occurs in the midst of a Canadian winter, when the mercury is far below the freezing point; suddenly, in the course of a single day, (in January generally), it ascends 2° or 3° above the point of congelation, the weather instantly changing from the greatest degree of cold to a complete thaw. The streets are inundated with the melted snow, the roads become soft, and carrioling on the river dangerous; the thaw sometimes lasts for 10 days, when intense frost again commences, producing a beautiful effect on the trees, by an incrustation of ice, which extends from the trunk to the smallest branch.

The severest winters are generally accompanied by N.E. winds, which convey from Labrador and the icy Pole increase of snow and frost; but the prevailing winds throughout the year are westerly; in the winter, cold, sharp, and dry airs blow from the N. and N.W., and in the summer genial breezes come from the W. and S.W. The E. wind blows for a few days in each month, and in the spring, during April and May, for a longer period. The aurora borealis, or northern lights, are extremely brilliant, and

assume various forms—at one time like gorgeous floating standards, at another as vast crescents, changing into magnificent columns or pillars of resplendent light, which move in majestic grandeur from the horizon towards the zenith, until the whole firmament becomes splendidly irradiated—these suddenly vanishing, and as suddenly reappearing under new forms and colours, and with varied brilliancy, until they entirely disappear. It is said by some, that a rustling like that of silk is heard during a fine aurora.

Summer commences about the middle of May, and is usually ushered in by moderate rains and a rapid rise in the meridian heat, though the nights are still cool; but in June, July, and August, the heat becomes great, and for a few days oppressive, the thermometer ranging from 80° to 95° in the shade; but the average heat during the summer seldom exceeds 75° .

A good idea of the spring of the year may be formed from the following Agricultural Report for Eastern Canada in April and May, by Mr. W. Evans of Côté St. Paul:—"Early in April well-prepared soils are in good order to receive the seed, and about the 10th or 12th wheat sowing very generally commences. The pastures should now be good, and will soon improve the condition of the cattle. Dairy produce abundant in the market, and the prices moderate. Notwithstanding the shortness of the seasons that farmers have here to work in the fields, Canada is by no means unfavourable for farming, and in ordinary seasons, with the seed got in early, on soils well prepared, a good crop of all kinds of grain, wheat particularly, may generally be obtained. With command of labour, which continued emigration will give, the farmer has only to employ double the number of hands for the working season, while the days are long and fine, that he would have required in England for the whole year, and he may get all his work done, perhaps at not a greater expense, and the labourer will have his summer's earnings to take to the woods (if he has a family), to commence farming on his own account, which should be the ultimate aim of all the labouring class of emigrants, if they expect to secure future independence for themselves and their families. At this period the country is charming; after a long and gloomy winter, the earth is again renovated—new life restored to plants—the trees dressed in leaves and blossoms—the fields in beautiful green, and all nature appears to rejoice."

That the climate of Canada has undergone a change is shown by the mean height of the thermometer at 8 A.M., for the month of July in the following years:—1799, 66.87; 1802, 68.35; 1806, 65.96; 1809, 60.60; 1812, 62.16; 1814, 60.45; 1816, 58.65; 1818, 64.00. Since 1818 the change is stated to be considerable, partly owing to the motion of the magnetic poles, and the forest-clearing necessary for the cultivation of the country; the effect is mainly observable in the lengthened duration of summer, and consequent shortening of winter. A wide discrepancy marks the temperature of corresponding latitudes in Europe and America; the inhabited parts of the two Canadas lie between 42° and 48° of N. lat., and should therefore enjoy the temperature of central and southern Europe, if influenced merely by their distance from the equator and pole; but it is far otherwise; yet when we remember that the Tiber was formerly frozen annually—that snow was usual at Rome—that the Euxine sea, the Rhône and Rhine were almost every year covered with a strong sheet of ice, we may look forward to modifications of the climate of Canada.

Among the meteoric phenomena observed in Canada, I may here record that singular one, termed the "*dark days*," which occurred in October, 1785, and in July, 1814. These appearances (as described in the transactions of the Quebec Literary and Horticultural Society), consisted of a dismal pitchy darkness at *noon-day*, continuing about ten minutes at a time, and frequently repeated at twelve, two, three, and four o'clock, the intervals being partially relieved by vast masses of clouds streaked with yellow, driving athwart the darkened sky, accompanied by sudden gusts of wind with much thunder, lightning, and rain, the latter extremely black, and in 1814, mixed with ashes and black powder. On the last occasion, when the sun could be seen, it appeared of a bright red colour. The Indians account for this phenomenon by ascribing it to a volcano in Labrador; and Mr. Gagnon has placed on record that he witnessed at St. Paul's Bay, in the Saguenay country, in 1791, the flames of a vast volcano, during the month of December, accompanied by violent shocks: flames mixed with dark smoke were thrown to a great height, causing the whole atmosphere to appear one mass of fire,—which was in strange contrast with the surrounding snow.

During the summer months there is a

great deal of electric fluid in the atmosphere, and the vividness of the lightning and loudness of the thunder are sometimes appalling in the extreme. As a general rule, it may be observed that the prevailing winds (viz. N.E., N.W., and S.W.) have considerable influence on the temperature of the atmosphere and state of the weather. The S.W. (the most prevalent) is generally moderate, and accompanied by clear skies; the N.E. and E. bring continued rain in summer, and snow in winter; the N.W. is dry, cold, and elastic, owing to the ice-bound region from which it springs. Winds from due N., S., or W., are not frequent, and the direction of the tide, which is felt for nearly 60 miles above Quebec, often causes a change in the atmospheric current.

As Canada becomes cleared, and its swamps drained, its climate will probably become milder, and its inhabitants enjoy as salubrious an atmosphere as we do in England; the heat of summer is now less relaxing, and the cold of winter more bracing than those of New York, or indeed any part of the United States. As regards agriculture, the lengthened winter of Lower Canada is certainly not on the whole unfavourable. The effect of snow covering the earth for a long period, is well known to be beneficial, and the fall of deep snow in a country where frost prevails from 5 to 6 months, is one instance among many, of the merciful dispensations of Providence; had it been otherwise, the continued action of cold on the earth would have so greatly deprived it of its natural caloric, that the heat of even the hottest summer would be insufficient to restore the warmth necessary to the germination of plants, and the ascension of the sap in vegetables. The natural heat of the earth is about 42° Fah., but water, when cooled down to 32° Fah., is converted into snow and ice; by this means, the rivers and the land, with their myriads of fish and insects, are protected by a dense crust of ice, which, being a non-conductor, preserves them from the influence of the immense volume of cold atmosphere, which is continually pressing from the polar regions towards the equator. Thus, that very coating of snow, which seems so chilling, is in fact a warm garment for the earth; and when the sun returns to gladden it, and the north winds are driven back to their icy region, the latent caloric of the earth begins to be developed, and the snow melts, and percolates with rapidity the stiffest soils, rendering them

peculiarly friable, and adapted to the immediate labours of the husbandman,—it is a singular fact, that for a month or six weeks before the apparent termination of the Canadian winter, vegetation is in active process even on the surface of the earth, beneath a covering of snow several feet thick.

At Chicoutomi, N. of Ha-Ha Bay, on the Saguenay, the river closes about Christmas, and the ice breaks up about the middle of April. Potatoes have been planted early in May, and though their tops were frost killed in the middle of September, yet when taken up in the latter end of October, they yielded 30 bushels for one. Indian corn, oats, barley, all the common garden vegetables, and even melons, ripen on the Saguenay in the open ground.

Western Canada.—In an extent of country, lying between 42° and 50° of N. lat., the climate is necessarily various; in the settled townships it is generally delightful, neither so cold in winter as in Eastern Canada, nor so hot in summer as at New York; in the Newcastle district, between 44° and 45°, a man may work in the woods, the whole winter, with his coat off, as in England; and the summer heat is tempered by a cool breeze, which sets in from the S.W. about 10 a.m., and lasts generally to 3 or 4 p.m. In summer, the wind blows two-thirds of the season from the S.W., *i. e.* along the great lakes.

In spring and autumn, this wind brings a good deal of moisture with it. The N.W., which is the most frequent in winter, is dry, cold, and elastic; the S.E. soft, thawy, and rainy: the wind seldom blows from W. or S., more rarely still from the N. Of course, changes of wind are accompanied by corresponding alterations of weather; the most sudden are to the N.W., followed by weather clear and cold for the season—almost every thunder shower clears up with this wind: the longest storms of rain, and the deepest falls of snow, are usually accompanied by easterly winds. It may be generally remarked, that the human frame, in all climates, is more sensibly affected by the quarter whence the wind blows, than by the mere height of the thermometer,—humidity with cold or heat rendering the extremes of each less endurable. The annexed table affords a comparative view of the climate of Western and Eastern Canada, throughout the year. Western Canada, lat. 42°—Eastern Canada, lat. 45°. The great lakes moderate the cold of Eastern Canada.

COMPARATIVE VIEW OF THE CLIMATES OF WESTERN AND EASTERN CANADA.

THERMOMETER—FAHRENHEIT.

Months.	W. CANADA.			E. CANADA.		
	Max.	Min.	Mean.	Max.	Min.	Mean.
January . . .	48	—20	18·17	33	—23	11·14
February . . .	50	8	23·87	40	—29	10·69
March . . .	52	0	26·94	47	—26	12·13
April . . .	83	40	59·70	81	9	48·91
May . . .	92	40	67·32	92	30	67·84
June . . .	97	57	77·51	95	55	76·84
July . . .	103	60	81·37	103	62	82·23
August . . .	99	55	73·24	100	58	74·7
September . . .	92	33	64·45	90	30	59·16
October . . .	74	28	48·	55	9	32·24
November . . .	54	10	34·53	40	—13	17·44
December . . .	41	—2	25·43	43	—21	11·94
For the year . . .	73·8	25·72	48·37	68·25	11·75	42·1
For the months June, July, & August . . .	96·66	57·33	77·37	99·33	58·33	77·54
Winter months . . .	46·33	—4·67	22·49	38·66	—24·33	11·25

WEATHER.

Months.	W. CANADA.			E. CANADA.		
	Clear.	Rain or Snow.	Cloudy.	Clear.	Rain or Snow.	Cloudy.
January . . .	days. 13	days. 8	days. 9	days. 23	days. 4	days. 4
February . . .	11	10	7	21	3	5
March . . .	21	8	2	25	3	3
April . . .	23	3	4	25	3	3
May . . .	22	5	4	23	4	4
June . . .	22	8		26	2	2
July . . .	25	3	3	26	3	2
August . . .	21	5	5	16	12	2
September . . .	21	5	4	18	8	5
October . . .	13	8	9	16	5	8
November . . .	11	14	7	14	7	10
December . . .	11	12	8	23	2	5
Total . . .	214	89	62	256	56	53

Note.—There were, during the year, in Western Canada, 34 days snow and 55 rain; and in Eastern Canada, 21 snow and 35 rain.

The climate of Toronto, Western Canada, may be judged of from the following facts—the result of a series of observations made for several years on the shore of Lake Ontario, in 43° 39' N. 79° 36' W. The writer describes the climate on the shores of Lake Ontario as being in many respects genial. The temperature, proceeding westward, is sensibly much milder, and this effect is still further increased by the presence of so vast a body of water, mitigating both the heats of summer and the cold of winter. Even a very short distance inland the difference in both respects is plainly perceptible to the most superficial observer. The early frosts which occasionally do so much damage, are here comparatively harmless. What is a storm of rain on the shore of the lake is frequently snow but a few miles further

back from it. The snow likewise disappears much sooner in the spring, and the average depth is considerably less. In short, it may fairly be said, that to an emigrant from the British Isles to Western Canada, the change is no less surprising than agreeable. There is a clearness, a dryness, a brilliancy in the atmosphere truly delightful after the raw drizzling rains, the fogs and moisture of Europe, while the extremes of temperature are never of long duration, tempered by the fresh gales sweeping the surface of the magnificent Ontario. And if it be admitted that the weather of spring is occasionally variable and unpleasant, this is more than compensated for by the brightness and beauty of the summer and autumn, often extending far into November. There is no doubt but that spring commences at least a month or six weeks earlier than in Quebec and Montreal; that the extremes, and likewise the sudden variations of temperature, are of far less intensity. Winters in Upper Canada sometimes occur with scarcely any snow at all, and a very moderate degree of cold—a fact never noticed in the Lower province—and the further westward we proceed, the more favourable is this difference.

The mean annual temperature for several years has been—

1831 ... 40.68	1836 ... 40.03	1842 ... 44.10
1832 ... 42.20	1837 ... 40.98	1843 ... 42.84
1833 ... 42.40	1838 ... 42.50	1844 ... 44.60
1834 ... 43.30	1840 ... 43.70	1845 ... 44.30
1835 ... 42.0	1841 ... 44.07	

A very inadequate idea, however, of a climate like that of the Canadas is to be formed from the annual or monthly means alone. In these results we lose sight, in a great measure, of the most striking feature, viz.: the sudden and great fluctuations of temperature to which it is subject; for it is evident that the same mean may be produced under very different circumstances—a moderate uniformity of temperature or high extremes balancing one another. Dr. Kelly observes, that, “perhaps there is no part of the globe where the range of the thermometer is greater than in Canada. In the instance given above, the fall in the course of 36 hours was 59 degrees. In winter, changes of a still greater extent, in the course of a day, are not unfrequent. It has been known at Quebec to be from 36° to 40°, with rain during the day, and to fall during the succeeding night many degrees below zero.” These variations are no doubt

less severe as we proceed westward, but still sufficiently rigorous, and certainly constitute the most disagreeable part of the climate. A change of 30 degrees in 24 hours, or less, is very common; and the variation has amounted to 43 degrees. The greatest recorded is that of December, 1834. On the noon of the 13th, the weather was fair, with a fresh southerly breeze. In the evening the wind went to N.W., and at 8 A.M. on the 14th, the mercury was at zero, it having been 43 degrees on the previous noon.

The most evident changes occur generally in the early months of winter, and they become less as the summer advances.

The annual range of the thermometer was in the years—

	Range		Range
1831 ... 16 to 84	100	1838 ... 4 to 89	93
1832 ... 20 “ 84	104	1840 ... 11 “ 84	95
1833 ... 10 “ 86	96	1841 ... 2 “ 92	92
1834 ... 2 “ 90	92	1842 ... 5 “ 87	82
1835 ... 15 “ 84	99	1843 ... 6 “ 92	98
1836 ... 20 “ 85	105	1844 ... 8 “ 85	93
1837 ... 9 “ 82	91	1845 ... 2 “ 94	96

Hence, mean annual range, between the hours of 8 A.M., and 12 = 95°.

	Mean Monthly Range.	Mean Daily Range.		Mean Monthly Range.	Mean Daily Range.
January ...	51	29	July ...	51	21
February ...	50	31	August ...	50	20
March ...	47	27	September ...	49	24
April ...	45	26	October ...	48	23
May ...	40	23	November ...	41	22
June ...	31	21	December ...	41	27

The above exhibits the mean variation monthly and daily. The month of February is the coldest in the year, July the hottest; the former likewise subject to the greatest extremes. Mean of October approximates nearly to the annual mean. Taking the number of days in the several years up to the freezing-point, we have as follows:—

1831 ... 113	1836 ... 140	1842 ... 98
1832 ... 112	1837 ... 124	1843 ... 126
1833 ... 115	1840 ... 101	1844 ... 102
1834 ... 116	1841 ... 104	1845 ... 105
1835 ... 100		

The mean of which is 112, being the average number of days of frost at 8 A.M. during the year.

The mean annual temperature of the central parts of England, from October to March, is usually 42°. In December, January, and February, it is generally below 40°. In July and August the range is from 62° to 65°. The mean annual temperature, noon and night, of the central part of England is about 50°.



SIR WALTER RALEIGH.

OB. 1618.

FROM THE ORIGINAL OF ZUCCHERO IN THE COLLECTION OF

THE MOST NOBLE THE MARQUIS OF BATH

Days of Rain and Snow in Western Canada.

Months.	Average for the year 1845.			
	Tem- pera- ture.	Days of Rain.	Depth of Rain.	Days of Snow.
January	23·8	3	0·27	8
February	24·6	2	0·12	4
March	33·7	3	0·37	6
April	42·7	11	1·94	3
May	51·4	■	1·63	—
June	62·4	■	2·51	—
July	67·2	5	1·00	—
August	67·0	■	1·74	—
September	58·0	15	4·38	—
October	46·5	11	2·32	1
November	35·0	5	0·55	5
December	19·6	1	0·00	9

Observations for nine years' record—

in	No. of days of Rain.	Depth. Inches.
1834	96	22·96
1835, for 11 months	70	19·79
1836, for 12 months	71	19·69
1837 " " "	82	25·51
1841 " " "	75	21·64
1842 " " "	89	26·49
1843 " " "	74	24·08
1844 " " "	92	19·27
1845 " " "	79	16·56

The mean annual depth of the above is 22·02 inches, which agrees with several places in England (London, 20; York, 22; Aberdeen, 23); but the manner in which the same quantity is distributed varies materially. In Canada it falls heavily, and for a short-time, the reverse of which is the case in the British Isles, for it is stated by an eminent meteorologist, that it has been found, from a long series of observations, to rain every other day in the latitude of London. The rainy season, moreover, in Canada (although rain falls sometimes more or less during the winter) may be considered as confined to the period between the middle of April and the end of November, four or five months of winter being nearly without it altogether.

The winter of Western Canada, although not even at present severe, is becoming milder every year, as cultivation extends and drainage increases. It is a great error to suppose that the great lakes, Ontario, &c., are frozen over at any time: they are always open in the centre, frequently exhibiting a beautiful and striking phenomenon during the inclement season. By reason of the water being warmer than the circumambient atmosphere, an evaporation resembling steam may be observed ascending in every variety of shape, in clouds, columns, and pyramids, from the vast surfaces of Lakes Ontario,

Erie, Huron, and Superior, as if from so many boiling cauldrons.

The chain of shallow lakes which run in an E. and S.E. direction from Lake Simcoe towards the midland district, are seldom frozen more than an inch thick until about Christmas, and are thawed again before April.

The earth in Upper Canada is not generally frozen at a greater depth than from 12 to 18 inches, and the snow rarely acquires a greater thickness than from 18 inches to 2 feet, unless when drifted. It is very seldom that the roads are permanently fit for the use of the *sleigh*, or *carriole*, before the second week in January, and they are again broken up by the end of March: this shows the duration of sharp frosts and snow: in fact, a labouring man may, if he chooses, work at all times out of doors: whereas in Eastern Canada, at the more northerly stations, it would be impossible so to do.

There are several remarkable phenomena in the climate of Western Canada, hitherto unaccounted for—one of these is termed—

The *Indian Summer*, which almost uniformly commences and terminates in the month of November, when the weather is delightfully mild and serene, with a misty hazy atmosphere, though the haze is dry and soft, appearing to rest chiefly on the horizon. In the evenings of the *Indian Summer*, the sun generally goes down with a crimson flush on the western heavens: the temperature is exceedingly grateful; and the feathered tribes, who instinctively seek a southern region on the approach of the rigorous winter of the north, avail themselves of this delightful season to prosecute their journey. Accordingly, at this time, the rivers and lakes of Western Canada may be seen covered with innumerable flocks of wild fowl.

Another very extraordinary meteorological phenomenon is that which may be denominated the *tertian intervals*. The greatest intensity of frost is always *remittent* at the end of the *third day*, when several days of mild weather succeed; thus the extreme severity of the winter is never felt more than two or three days at a time.

Owing perhaps to the distance from the sea, and the absence of saline particles in the atmosphere, the climate is so dry, that metals rust but slightly by exposure, even on board vessels navigating lakes. Hence iron bolts are used in ship building, instead of copper.

The people think, and the observation of meteorologists appears to justify the popular opinion, that when the lake-waters rise to a great height, the season is unhealthy. In 1815, the waters of Lake Ontario, which had been annually rising, attained a greater elevation than they had done for 30 years, and the weather was unusually trying.

On the whole, the climate of Eastern and Western Canada is favourable to health and longevity. In the Niagara, and other districts of Eastern Canada, peaches arrive at great perfection in the open air. The energy of the inhabitants is one indication among many of the salubrity of the atmosphere.

CHAPTER IV.

POPULATION OF E. AND W. CANADA, CLASSIFICATION, CHARACTER, DIVISION OF RACES, GOVERNMENT, LAWS, RELIGION, EDUCATION, THE PRESS, CRIME, &c.

CANADA, like other portions of the American continent, was densely peopled by a copper-coloured race, to whom the term Indians was given by the discoverers of the "New World." The establishment of European Colonies, and the wars waged between the early English and French settlers in Canada, led to the rapid destruction of the aborigines, who being neither agricultural or nomadic, and living solely by the produce of the chase and fishing, were driven into the back settlements as civilization extended. The Abenagua, Algonquin, Iroquois, Missisagua, and Huron Indians, occupied the districts from below Quebec to the country around lakes Erie and Huron.

We have no means of ascertaining the numbers of the Indians then inhabiting Canada. Charlevoix, in 1721, estimated the number of some of the Algonquin tribes at 6,000 souls; but they were then diminishing daily under the baneful effects of intoxicating liquors, and by diseases introduced from Europe. Some of the Iroquois tribes with whom the French waged several disastrous wars, were estimated by Charlevoix, in his *History of New France*, vol. iii. p. 203, at 60,000 souls.

The Indian population remaining in 1828 was estimated by Mr. McTaggart (*Three Years in Canada*) at 43,000, viz., 15,000 in Eastern Canada, and 28,000 in Western Canada.

The British Government, in fulfilment of previous engagements, distributes annually certain articles among a portion of the aboriginal population in Canada; and the following is an official statement of the presents required for the year 1849:—

Full equipment—chiefs, 46; warriors, 50; women, 77. Common equipment—chiefs, 190; warriors, 3,356; women, 3,977; boys, 1,024; girls, 1,021; total, 12,818. The equipments, include blue and grey clothes, cottons, linen, about 12,000 blankets, brass kettles, muskets, powder, ball, tobacco, needles (22,428), combs (5,607), awls (5,607), knives (5,607).

The character of the Indians and their different tribes, will be given under the description of the Hudson's Bay territories.

In 1692, Quebec contained only 50 Europeans, including both sexes. In 1706, M.M. Randot stated the population of Canada at 20,000. In 1714, M. De Ponchartrain, in a letter to M. De Vaudreuil, stated, that Canada contained 4,484 men capable of bearing arms, i.e., from 14 to 60 years of age, which multiplied by 6, gives 26,904.

In 1720, the city of Quebec contained 7,000, and Montreal 3,000 inhabitants.

The following details are chiefly derived from the documents laid before the Canadian Parliament in 1849. The population of Eastern Canada is stated to have increased as follows:—

Year.	Pop.	Year.	Pop.
1676	8,415	1825	423,630
1688	11,249	1827	471,876
1700	15,000	1831	511,922
1706	20,000	1836	572,817
1759	65,000	1844	690,782
1784	113,000	1848	768,334

The census of 1825 showed, on a population of 423,630, male adults to the number of 105,571, or a per centage of 24.90. In 1844 on a population of 690,782, as compared with 511,920 in 1825, the increased

per centage of males was 34.94. In 1844-45 there were, of *white* inhabitants—males, 344,855; females, 346,077; *coloured*—males, 140; females, 141.

There was no census taken in Eastern Canada for 1848; but by careful estimates and per centages on the previous rates of annual increase, an approximate calculation has been made; and the following table shows the area in square miles of each county in Eastern Canada, and the population in 1844 and 1848:—

Districts.	Land, Square Miles.	Population.	
		1844.	1848.
GASPE:—			
Gaspe	4,053	7,146	7,771
Bonaventure	4,560	8,246	8,786
QUEBEC:—			
Saguenay	75,700	13,475	19,364
Montmorenci	7,465	8,434	8,988
Quebec	16,040	45,676	65,805
Portneuf	10,440	15,922	17,777
Rimouski	8,200	17,630	19,683
Kamouraska	1,090	17,465	18,992
L'Islet	1,220	17,013	18,520
Bellechasse	1,083	14,549	15,823
Lotbiniere	735	13,697	15,292
Dorchester	2,050	34,817	38,877
Megantic	1,465	6,449	7,535
THREE RIVERS:—			
Champlain	6,200	10,404	11,312
St. Maurice	7,300	20,833	17,981
Drummond	1,644	9,374	10,467
Yamaska	283	11,956	13,000
Nicolet	487	16,310	17,735
ST. FRANCIS:—			
Sherbrooke	2,785	13,485	15,055
Stanstead	632	11,964	13,009
MONTREAL:—			
Berthier	9,590	26,859	29,988
Leinster	5,090	25,633	28,507
Terrebonne	545	20,846	23,052
Two Mountains	1,404	26,835	29,952
Ottawa	35,100	12,434	17,870
Montreal	197	64,306	71,039
Vaudreuil	1,340	17,063	18,554
Beauharnois	717	28,746	32,095
Huntingdon	488	36,204	39,371
Chambly	211	17,155	18,610
Verchères	198	13,167	14,029
Richelieu	373	20,888	22,255
St. Hyacinthe	477	21,937	23,894
Rouville	429	22,898	24,900
Shefford	749	10,105	11,282
Missisquoi	360	10,865	11,815
Total	209,290	690,782	768,334

This statement shews how thinly Eastern Canada is peopled: there being not more than *three mouths and a half* to each square mile.

The census of 1844 in Eastern Canada was accurate, and it shows that out of 690,782 inhabitants, there were under 15 years of age, males, 160,535, females, 158,731 = 319,266.

The proportion in 1844 of married men to the whole, was 60.55 per cent.; and of

unmarried, 39.45. Married women above 14 years of age, 61.18 per cent.; and single, 38.82 per cent.

Males.	Married.	Single.	Total.
15 and under 21	2,038	39,589	41,627
21 " 30	22,974	20,176	43,150
30 " 40	33,684	5,909	39,593
40 " 50	25,797	31,119	28,916
50 " 60	15,148	2,089	17,237
60 and upwards.	13,393	2,780	16,173
Total in 1844 . .	173,034	73,662	186,696
" 1831 . .	83,153	60,690	143,843
" 1825 . .	69,938	36,935	105,873

In England it is assumed that the births are about 1 to 33 of the whole population, and the deaths 1 in 54. In Eastern Canada, according to the census of 1844, there were—

Districts.	1844.		
	Births.	Deaths.	Marriages.
Quebec	1 in 20	1 in 41	1 in 109
Montreal	" 20	" 51	" 111
Three Rivers	" 21	" 60	" 106
Gaspé	" 29	" 126	" 136
St. Francis	" 101	" 348	" 230
In the whole	" 21	" 53	" 113
Total numbers	32,279	12,928	6,118

Note.—The returns for St. Francis district are imperfect, and fractions omitted.

Districts.	1847.		
	Births.	Marriages.	Deaths.
Montreal	18,772	381	9,435
Quebec	11,715	2,065	10,221
Three Rivers	3,612	672	1,238
St. Francis	514	161	120
Gaspé	594	104	128
Total	35,207	6,283	21,142

Increase of Births over Deaths, 14,165.

The census of 1844 shows, in Eastern Canada, the following interesting particulars:—

Deaf and Dumb in 1844.

Districts.	Males.	Fems.	Total.	Average.
Montreal	254	167	421	1 in 875
St. Francis	14	17	31	" 1,046
Three Rivers	39	31	70	" 983
Quebec	73	58	151	" 1,360
Gaspé	7	3	10	" 1,539
Total	407	276	683	1,011

The French colonists did not advance far into Western Canada, probably owing to their wars with the Indians. Previous to 1770, the only white settlers in Western Canada were a few Frenchmen in the vicinities of Kingston and Detroit. When the United Colonies (now the United States) threw off their allegiance to England, and the war commenced between them and the parent state, many desirous of remaining under the crown of England, fled from the revolting provinces, and fixed their residences at the frontier townships in Western Canada. Their numbers were gradually increased by emigrants from Britain. The progressive augmentation since 1811 has been as follows:—

Population in Western Canada.

1811 ..	77,000	1835 ..	336,469
1824 ..	151,097	1838 ..	385,824
1825 ..	158,027	1839 ..	407,515
1826 ..	163,702	1840 ..	427,441
1827 ..	176,059	1841 ..	465,357
1828 ..	261,060	1842 ..	486,055
1832 ..	261,069	1848 ..	732,292
1834 ..	320,693	1849 ..	750,000

The average annual increase from 1824 to 1828 was 9,261; from 1828 to 1832 it was 18,661; from 1832 to 1834 the yearly augmentation was 22,212; from 1834 to 1836 18,712.

Taking the ratio of increase during the periods from 1824 to 1833, and from 1828 to 1836, the population of Upper Canada would double itself in less than 10 years.

The increase of males and females in Western Canada since 1821 has been—

Years.	Males.	Females.	Years.	Males.	Females.
1821	65,792	56,795	1832	130,003	117,039
1823	79,238	70,931	1836	189,271	168,916
1827	95,903	85,842	1842	259,914	226,141
1828	99,465	80,093	1848	387,631	338,248
1829	103,285	92,880			

In 1842 and 1848 the females were to the males as 100 to 88. In 1848 the total female adults were 179,468, of whom 111,034, or 62.04 per cent., were married.

Population of Upper Canada, and its increase at several periods between the years 1824 and 1848, according to the divisions into Municipal Districts.

Districts.	1824.	1825.	1830.	1832.	1834.	1836.	1839.	1841.	1842.	1848.
Bathurst	10,121	10,309	16,015	19,636	22,079	24,127	24,632	27,635	21,655	29,448
Brock .....	..	..	..	..	..	..	..	15,621	17,286	29,219
Colborne .....	..	..	..	..	..	..	..	..	13,706	21,379
Dalhousie .....	..	..	..	..	..	..	..	..	16,193	25,520
Eastern	14,879	16,524	19,755	21,735	25,105	28,911	28,827	30,279	32,008	38,653
Gore	13,157	14,215	20,945	27,224	34,618	43,920	51,627	42,577	45,059	67,671
Home	16,609	17,946	28,565	36,633	55,508	53,214	59,209	67,074	83,301	106,995
Huron .....	..	..	..	..	..	..	..	..	7,190	20,450
Johnstown	14,741	15,266	19,277	24,299	28,061	29,237	32,669	35,952	32,445	43,436
London	17,539	17,351	22,803	28,941	37,162	47,095	43,882	32,257	30,276	46,547
Midland	27,695	27,116	34,190	37,457	32,509	24,818	26,179	32,208	34,448	45,299
Newcastle	9,292	9,966	14,850	21,019	27,404	32,936	36,914	41,951	31,015	47,433
Niagara	17,552	18,990	20,916	24,181	27,347	30,447	29,953	34,577	36,642	43,095
Ottawa	2,560	2,580	2,833	5,293	6,325	7,487	8,483	9,324	7,369	10,364
Prince Edward's ..	..	..	..	..	11,823	12,343	13,999	14,661	14,945	18,021
Simcoe .....	..	..	..	3,985	—	10,215	10,743	11,576	—	23,050
Talbot .....	..	..	..	..	..	..	9,066	9,626	10,455	19,274
Victoria .....	..	..	..	..	..	10,587	12,085	13,161	13,196	23,133
Wellington .....	..	..	..	..	..	..	..	13,851	14,476	36,865
Western	6,952	7,764	9,288	10,627	12,752	17,065	19,267	23,026	24,390	27,440
Totals	151,097	158,027	210,437	261,060	320,693	372,502	407,515	465,357	486,055	723,292
Increase:—										
1825 .....	..	6,930	52,410	50,523	59,633	51,809	35,013	57,842	20,698	237,237
1830 .....	..	..	59,340	103,033	110,256	111,442	86,822	92,855	78,540	258,835
1832 .....	..	..	..	109,963	162,666	162,065	146,455	144,664	113,553	313,777
1834 .....	..	..	..	..	169,596	214,475	197,078	204,297	165,362	350,790
1836 .....	..	..	..	..	..	221,405	249,488	254,920	224,995	402,599
1839 .....	..	..	..	..	..	..	256,418	307,330	275,618	462,232
1841 .....	..	..	..	..	..	..	..	314,260	328,026	512,855
1842 .....	..	..	..	..	..	..	..	..	334,958	565,265
1848 .....	..	..	..	..	..	..	..	..	..	572,195

Note.—In the detail, the number for 1848 is 723,332, showing a difference of 40. The returns for Simcoe in 1834 and 1842, are included in the Home district.

The progressive increase of both sexes, according to ages, is thus shown in Western Canada:—

	Under 16 years of age.		Over 16 years of age.		Total.
	Males.	Females.	Males.	Females.	
1824 . . .	37,346	35,606	41,393	36,752	151,097
1832 . . .	67,119	62,734	70,427	60,780	261,060
1834 . . .	81,951	76,541	88,182	74,109	320,693
1842 . . .	137,664	122,252	108,634	117,505	486,055

According to the census of 1848, there were—

Years.	Males.	Fem.	Males.		Females.	
			Mar.	Single	Mar.	Single
Under 5 . . .	70,834	69,516	—	—	—	—
5 and under 14 . . .	96,436	89,264	—	—	—	—
14 " 18 . . .	—	—	1,950	31,588	—	—
18 " 21 . . .	—	—	1,551	20,516	—	—
21 " 30 . . .	—	—	25,297	30,698	—	—
30 " 45 . . .	—	—	—	—	87,906	60,664
45 " 60 . . .	—	—	80,637	13,908	—	—
60 and upwards . . .	—	—	—	—	23,398	7,500
60 " . . .	—	—	11,088	3,128	—	—

Note.—The Number of Children between 5 and 16 years of age was 19,032.

Census of Western Canada by Electoral Divisions, as divided by Act 8 Vic. c. 7.

Districts.	Area in Acres.	Population.	
		1842.	1848.
Bathurst . . .	1,260,800	21,655	29,448
Brock . . .	584,320	17,286	29,219
Colborne . . .	647,040	13,706	21,379
Dalhousie . . .	448,000	16,193	25,520
Eastern . . .	779,520	32,008	38,653
Gore . . .	741,760	45,059	67,671
Home . . .	1,361,600	83,301	106,995
Huron . . .	1,104,000	7,190	20,450
Johnstown . . .	1,021,000	32,445	43,436
London . . .	990,040	30,276	46,547
Midland . . .	1,198,720	34,448	45,299
Newcastle . . .	1,344,640	31,015	47,433
Niagara . . .	703,360	36,642	43,095
Ottawa . . .	532,960	7,369	10,364
Prince Edward . . .	220,000	14,945	18,021
Simcoe . . .	1,448,800	in home	23,050
Talbot . . .	384,000	10,455	19,274
Victoria . . .	842,000	13,196	23,133
Wellington . . .	1,097,600	14,476	36,865
Western . . .	1,616,640	24,390	27,440
Total . . .	18,358,800	486,055	723,292

The contents of each district are given according to Bouchette, making a total of 258,684 square miles. This includes only the surveyed and settled portion of Western Canada, which contains, according to the same authority, a superficial area of 141,000 square statute miles. The number of indi-

viduals to each square mile in the settled districts above named is 25, and to each square mile of area in Western Canada there are 5 inhabitants. The area of the Indian territory in the vicinity of Lake Huron is 1,883,200. New districts and townships are progressively added to the settled parts of the province. The average area of each township is about 60,000 acres. The fine country N. of the Midland, Victoria, and Colborne districts, S. of the parallel of 47° N., and situated between Georgian Bay and the Ottawa, 150 miles long by 150 broad, is as yet unoccupied, and would contain an immense population.

Population of Cities and incorporated Towns in 1848.—*Cities:* Toronto, 23,503; Hamilton, 9,889; Kingston, 8,369. *Towns:* Bytown, 6,275; Cornwall, 1,454; Brockville, 2,449; Prescott, 1,775; Picton, 1,599; Belleville, 2,939; Cobourg, 3,513; Port Hope, 2,025; Niagara, 3,100; St. Catharines, 3,416; London, 4,584; Peterboro, 1,906; Brantford, 2,250; Dundas, 1,912. The number of inhabitants to each house is $6\frac{1}{2}$, and the average of persons in each family is 6.

Table of Distances of Principal Towns.

Montreal.											
82	Cornwall										
131	■	Prescott									
143	61	12	Brockville.								
199	117	68	56	Kingston.							
258	176	127	115	59	Belleville.						
304	222	173	161	105	46	Cobourg.					
390	308	259	247	191	132	86	Toronto				
475	393	344	332	276	217	171	85	Niagara.			
482	400	351	339	283	224	178	92	7	Queenston.		
508	426	377	365	309	250	204	118	33	26	Fort Erie	

In 1848 the births were 27,688; or 1 to every 26. Deaths, 11,518; or 1 to 63. Difference, 16,170; or 1 to 37. The general average of births and deaths in England is of the former 1 in 33, and of the latter 1 in 54. This shows the superior salubrity of Canada, where twin and triplet births are frequent. The *Colonial Magazine* of 1845 thus announces an instance:—"At Buckingham, near Bytown, Canada, on July 10, Mrs. O'Callaghan of two boys and a girl. Mrs. O'Callaghan has been the mother of five children within the space of two years."

—According to the United States' census in 1840, children under 5 years constitute about 15 per cent. of the population; in Canada nearly 20 per cent.; in England the proportion is much less. For every 100 males born, about 42 die, and for every 100 females, 41 die. In Western Canada there were—

In 1848.	Males.		Females.	
Births . . .	15,317	—	12,371	—
Deaths . . .	6,429	—	5,089	—
Lunatics and Idiots . . .	457	1 in 848	311	1 in 1,088
Deaf and Dumb . . .	234	" 1,656	194	" 1,743
Blind . . .	152	" 1,550	200	" 1,691

The census of the United States does not classify the sexes, as regards lunatics, deaf, dumb, and blind. The proportions of both sexes in the U. States, according to census in 1840, were—blind, 6,916, or 1 in every 2,842 inhabitants; deaf and dumb, 7,659, or 1 in every 2,228; lunatics and idiots, 17,434, or 1 in every 979. The total number afflicted as above stated were—in Canada, 1,548, or 1 in every 472 inhabitants. In the United States, 32,009, or 1 in every 533 inhabitants.

In 1842 the census for Western Canada showed a total afflicted as above:—males, 798, or 1 in every 326; females, 886, or 1 in every 255; total, 1,684, or 1 in every 288. This indicates a considerable improvement in the number of sane and sound births. In the census of 1842 the idiots are properly distinguished from the lunatics, thus:—

<i>Idiots.</i>	
Males . . .	221, or 1 in 1,176
Females . . .	178 " 1,271
	399 " 1,818

<i>Lunatics.</i>	
Males . . .	241, or 1 in 1,078
Females . . .	487 " 464
	728 " 667

The increase of farm servants in Western Canada shows an increase in the number of those able to employ assistance. In 1842 the number of *resident* farm servants was 3,184; and in 1848, 7,514—more than double. In the same period the domestic female servants increased from 5,181 to 10,701. In 1848 there were, according to sex—

—	Males.	Females	Total.
Domestic Servants . . .	4,409	10,701	15,110
Coloured Persons . . .	3,016	2,453	5,469
Persons attending Schools or Colleges . . .	46,371	34,090	80,461

According to the census of 1848, the population of 723,332 inhabited 112,595 houses; or nearly 7 to each house. The average of persons in each family was about 6. The number of heads of families 119,061. Proprietors of real estate, 60,559; non-proprietors, 49,321.

Where the returns were perfect, in 616,514 persons there were 100,405 heads of families. Employed in professions, 1,877; trade, commerce, and handicrafts, 19,713; agriculture, 68,417; labourers, 11,135; in factories, 3,866. In the whole province about 80 per cent. of the population derived their subsistence directly from agriculture. The non-producing classes do not amount to 8,000.

Population of Canada, according to origin.

Countries.	Eastern Canada.	Western Canada.	
	1844.	1842.	1848.
English . . .	12,136	43,009	64,560
Irish . . .	44,512	82,728	140,673
Scotch . . .	13,591	42,003	57,604
Canadian-French . . .	520,215	14,767	20,490
" British . . .	86,075	261,822	383,084
From Continental Europe, &c. . .	2,471	6,957	18,847
" United States . . .	12,193	34,739	32,579
Total . . .	691,193	486,055	717,837

There was no census of Eastern Canada in 1848, although enjoined by law; it is therefore impossible to state the number of French Canadians now in Eastern and Western Canada; they are certainly not less than *six hundred thousand*. In Western Canada the proportions of races and increase per cent. in 7 years were:—

Countries.	1842.	1848.	Increase per cent. in 7 years.
England . . .	8-85	8-99	50-10
Ireland . . .	17-02	19-60	70-04
Scotland . . .	8-65	8-03	37-04
Canadian-French . . .	3-05	2-85	38-75
" British . . .	53-86	53-36	46-31
Continental Europe . . .	1-43	2-63	170-90 decrease.
United States . . .	7-14	4-54	6-63
Total . . .	100-00	100-00	Increase.
On the whole Pop., according to origin			47-68
According to census, by ages, in 1848 .			51-40

It is evident that no influx of natives of the United States takes place. The equable

rate of increase of the different nations is remarkable.

Population of Canada according to Religious Census.

Denominations	Eastern Canada.	Western Canada.	
	1844.	1842.	1848.
Church of England . . .	42,274	107,791	171,757
Church of Scotland . . .	26,725	77,869	67,900
Church of Rome . . .	57,174	65,203	123,707
British Wesleyans . . .	10,814	23,342	90,363
Canadian Wesleyans . . .	3,010	32,313	
Episcopal Methodists . . .	711	20,125	36,893
Other Methodists . . .	1,318	7,141	14,977
Presbyterians, not Church of Scotland . . .	5,231	18,220	65,101
Congregationalists and Independents . . .	3,890	4,253	6,126
Baptists and Anabaptists . . .	4,067	16,411	28,965
Lutherans . . .	96	4,524	7,420
Quakers . . .	144	5,200	6,148
Jews . . .	154	1,105	134
Other denominations, or not accounted for . . .	20,145	101,538	83,847

Note.—"Other denominations" in Western Canada in 1848, include 62,128 of no creed or denomination; 4,767 menonists; 2,269 universalists; 700 unitarians; and 13,983 of all other denominations. The presbyterians of Western Canada in 1848, include 64,729 of the "free presbyterian church of Canada," and 20,372 of other presbyterians. The census of 1848 of Western Canada, shows a deficiency of 22,790, compared with the census by ages, which have been divided among the several denominations in proportion to the numbers returned. Sectarian jealousies prevail so strongly that perfect accuracy in the religious census cannot be expected.

The character of the inhabitants of Canada partakes of the source whence they spring—if of French descent, levity and obsequiousness give place to ease, or rather gentleness of manner, combined with manly, yet respectful freedom of deportment; the descendants of the English lose the rusticity and boorishness peculiar to the lower class of their ancestors; and with abundance of the necessities of life, and leisure for the improvement of their minds, the natural saturnine character of the British is relieved by a pleasing buoyancy of spirit and enthusiasm of action.

The offspring of the original French inhabitants, forming about one-half of the population, deserve a few special remarks as to their habits and manners. Most of the people are proprietors to a greater or less extent, of land; and the equal division of property, on the demise of a parent, contributes to spread a large mass of industry and capital over the country. Possessed of the means of a comfortable existence, and freed from the dread of future want, the Canadian spends his life in cheerful toil, and evinces

by his light-hearted, hospitable, and social habits, the blessings derived from the enjoyment, on no harsh terms, of the few and simple necessities of life.

The true Canadian, although fond of pleasure and social happiness, is yet rather a sedentary being, and of a staid, often sombre deportment; peculiarly attached to the locality which gave him birth; devoted to the religion in which he was educated, sincere in his respect for those whom he considers his superiors, and remarkable for his faithful fulfilment of every social duty. Although unlettered himself in the European sense of the term, he is ever ready to pay his tribute of respect to those possessed of mental endowments—the more so if literary attainments be accompanied by moral worth; with a mind deeply imbued with early prejudices as to religion, country, and institutions, yet charitable to a considerable extent towards the feelings and even the failings of others; polite, without affectation; generous, without parade; slow to offend; quick to resent an insult, yet ready to forgive. Many governors have borne testimony to the favourable traits which distinguish the French Canadians. Lord Durham said—"they are mild and kindly, frugal, industrious, and honest; very sociable, cheerful, and hospitable, and distinguished for a courtesy and real politeness, which pervades every class of society."

The French Canadian women are when young, handsome brunettes, fond of finery, but good wives and mothers; their wit is sparkling, and in constant exercise, more playful than sarcastic, delighting rather than wounding, but withal remarkable for a kind of good-natured maliciousness. All who have visited the Canadas agree that society there is extremely agreeable—freed from unnecessary forms, giving to life an air of delightful ease, and to private intercourse a charming tone and colouring.

As in all Roman catholic countries, the enjoyments of the people are connected with their religious ceremonies; on the Sabbath morn, the parish, or village chapel, is thronged with both sexes, clad in their best habiliments; but, the service over, and that part of their duty to the Creator fulfilled, the remainder of the day is devoted to festivity; the enjoyment of social happiness being considered an essential part of the weekly festival. Sunday afternoon is, in fact, a season of gaiety; the parish church collects together an assemblage of relatives and

friends intent on enjoyment; the old meet to converse on the state of the weather—the crops—the politics of the day; the young to make love to their sweethearts—the chevalier, on his best pacer, or driving his finest carriage—the lady, adorned in the most becoming style, palpitating with the hopes and fears of an approaching bridal day—the evening in cheerful feasts, to which dancing is frequently superadded. The *habitans* (French Canadians) of the poorer classes are generally tall and thin, with small, dark, lively eyes, aquiline noses, and thin lips. Those who are much exposed to the air are as dark as the Indian race.

The dress of the *habitan* is peculiar, as well as his manners; it consists of a grey cloth *capot*, or large coat reaching to the knee, bound round the middle with a sash of scarlet, or exhibiting various bright colours, and close-buttoned to the neck: the *bonnet bleu*, or a light straw hat is worn in the heat of summer, a fur cap in winter; mocassins of sole leather complete the male peasant's usual dress. The female peasant's costume is similar to that worn in the south of France—the *mantelet*, a jacket of dark, or different coloured cloth, with a stuff petticoat, mocassins, and a head dress *à la Française*: on Sunday, of course, the habiliments are of more varied character, and where the English girl wears one colour, the Canadian will exhibit half a dozen of the brightest hues. The people are frugal in their habits; their diet consists chiefly of soups, vegetables, and fish, and their farms furnish almost every thing they require.

Of the houses it may be sufficient to observe that there is a great similarity between those of the farmers and peasantry in Normandy, and the people of a similar grade in Canada; they are generally of one story, built of wood, whitewashed, extremely clean within, and having the chimney in the centre of the building; there is a partition between the kitchen and large apartment, where the inmates dwell; the sleeping-rooms are at either end of the house, which is well furnished with beds, home-made linen of excellent texture; strong, convenient, and often handsome furniture, and a large variety of culinary utensils.

The adjacent garden, though laid out with little regard to the rules of art, abounds in fruit and vegetables, the rearing of which devolves on the women of the family, whose taste is often displayed in small patches of flowers, which appear to grow wild, but are

really raised with care, to afford that exquisite enjoyment which the rudest and least sophisticated seem to feel in viewing and scenting "the lilies of the fields." The farm lies around the house; and at a greater or less distance, the river or lake offers an ample supply of the finny tribe for a *cuisine*, always abundant, sometimes luxurious: while the rich maple yields a large store of sugar, for the preservation of the luscious summer fruits, through a long and dreary winter.

Lord Durham, in his able report, has drawn an excellent picture of the French Canadian; he traces from its commencement the deep-rooted hatred of race which exercises so injurious an influence upon the internal peace and prosperity of Canada, and renders its legislation so difficult at the present moment. At the period of the early colonization of Canada, the institutions of France were, perhaps more than those of any other European nation, calculated to repress the intelligence and freedom of the great mass of the people. The same ill-organised and repressive despotism followed the Canadian colonist across the Atlantic. He was allowed no voice in the government of his province or the choice of his rulers, and not even permitted to associate with his neighbours for the regulation of municipal affairs. He obtained his land on a tenure singularly calculated to promote his immediate comfort, but which placed him at once in a life of constant labour and of feudal dependence. Ecclesiastical authority continued to exercise its influence over him—education was neglected both by the government and by the people, and congregated together in rural communities, occupying portions of the unappropriated soil, with abundance of the mere necessities of life, retained in a course of labour, varied only by the social enjoyments to which the French are so much attached, the colonists remained for years the same uninstructed, inactive, and unprogressive people. No towns were established; a series of continuous villages along the banks of the St. Lawrence gave the seignories the appearance of a never-ending street; and the farms owed their productiveness to the fertility of the soil, rather than to the skill employed for its cultivation. Their energy was manifested chiefly in the fur trade, and in hunting, and commerce was scarcely deemed deserving of attention. With the tenacity peculiar to the Gothic or Celtic race, the people clung to

ancient prejudices, customs, and laws; and the habits and manners which gradually passed away from European society were preserved in all their pristine character in the new world. At the time of the British conquest of Canada, the people were in an old and stationary state of society—in the vicinity of an active and progressive Anglo-Saxon race. A few families possessed seigniorial rights, large, though not valuable, properties, and much influence over the bulk of the people, of whom few depended on wages for their support—the mass being in the condition of a hard-working yeomanry.

The piety of the early founders of Canada, and the foresight of the Jesuits, provided seminaries and means for public instruction, which was little attended to until density of population pressed on the means of existence, and made the cadets of families seek in a profession the subsistence heretofore derived from the land. Two or three hundred young men thus annually became by education superior to the community whence they sprang, and as the military and naval professions were resources not available to the colonists, the church, the law, and medicine soon became overthronged with village priests, advocates, and mediciners, who, possessed of superior knowledge, wielded an extraordinary influence over an uninstructed population, with whom they lived on terms of social equality, and from whom they were separated by no barriers of manners, of pride, or distinct interests. Unfortunately the British government took no steps to conciliate or to employ this class, who naturally fell into the position of demagogues, and were moved as one mass by the leading members of the House of Assembly, during the struggle for constitutional rights, which has been detailed in the first chapter.

"Among the people," says Lord Durham—

"The progress of emigration has of late years introduced an English population, exhibiting the characteristics with which we are familiar, as those of the most enterprising of every class of our countrymen. The circumstances of the early colonial administration excluded the native Canadian from power, and vested all offices of trust and emolument in the hands of strangers of English origin. The highest posts in the law were confided to the same class of persons. The functionaries of the civil government, together with the officers of the army, composed a kind of privileged class, occupying the first place in the community, and excluding the higher class of the natives from society, as well as from the government of their own country. It was not till within a very few years, as was testified by persons who had seen much of the country, that this society of civil and military

functionaries ceased to exhibit towards the higher order of Canadians an exclusiveness of demeanour which was more revolting to a sensitive and polite people than the monopoly of power and profit: nor was this national favouritism discontinued until after repeated complaints and an angry contest, which had excited passions that concessions could not allay. The races had become enemies ere a tardy justice was extorted; and even then the government discovered a mode of distributing its patronage among the Canadians, which was quite as offensive to that people as their previous exclusion."

The English capitalist, merchant, trader, and farmer became formidable competitors with an inert race; they rapidly acquired about half of the more valuable seigniorial rights in the townships, and considerable irritation arose by the transfer of large properties from burthened seignors to active British agriculturists and settlers, whose superior energy, skill, and capital, not only threw into their hands the entire wholesale, and a large proportion of the retail trade of the province, but also vested in their hands the most profitable and flourishing farms. It will afford an idea of the influence and power possessed by the British minority previous to the legislative union of Eastern and Western Canada, by examining the relative investments of the two races in the public institutions of the province:—

Public Companies.	Capital.	Shares	British.	French
ENGLISH-CANADIAN:	£.		£	£
Stock of Montreal Bank .	250,000	5,000	217,400	2,600
Ditto of City Bank .	200,000	8,000	192,800	7,200
Ditto of Champlain, and St. Lawrence Railway Company .	50,000	1,000	49,150	850
Ditto Montreal Water Works .	70,000	80	70,000	—
Ditto of St. Lawrence Steam-boat Company .	65,000	48	61,616	3,385
Ditto Montreal Steam Tow Boat Company .	40,200	710	38,518	1,682
Ditto Ottawa and Rideau Forwarding Company .	33,190	1,172	32,482	608
Ditto St. Lawrence Steam- boat and Mail Coach Company .	25,000	1,000	25,000	—
Ditto Montreal Gas Works	20,000	1,000	19,500	600
Ditto St. Ann Market .	16,500	—	13,575	1,925
Ditto of other Steam-boats and capital invested in the Forwarding estab- lishments on the St. Lawrence, above and below Montreal .	50,000	—	50,000	—
	818,890	—	800,040	18,850
FRENCH-CANADIAN:				
Stock of Mutual Insur- ance Company .	40,000	—	16,281	23,719
Ditto Banque du Peuple	80,000	—	30,000	50,000
People's Bank .	80,000	—	30,000	50,000
	938,890	—	846,321	92,569

Previous to the rebellion of 1837, the

antagonism of race had risen to a great height. It would not be possible to convey in few words an adequate idea of the deep-rooted feelings of estrangement and almost aversion with which the French and English Canadians regarded each other, and by which the tranquillity of the province was so seriously injured. The language of Lord Durham is so clear upon this point, and the facts he states so elucidatory of the mischievous consequences of playing off the prejudices of two races against each other, that I cannot resist giving the following portion of the Report laid by his lordship before the queen:—

"I do not believe that the animosity which exists between the working classes of the two origins is the necessary result of a collision of interests, or of a jealousy of the superior success of English labour. But national prejudices naturally exercise the greatest influence over the most uneducated; the difference of language is less easily overcome; the differences of manners and customs less easily appreciated. The labourers, whom the emigration introduced, contained a number of very ignorant, turbulent, and demoralized persons, whose conduct and manners alike revolted the well-ordered and courteous natives of the same class. The working-men naturally ranged themselves on the side of the educated and wealthy of their own countrymen. When once engaged in the conflict, their passions were less restrained by education and prudence: and the national hostility now rages most fiercely between those whose interests in reality bring them the least in collision.

"The two races thus distinct have been brought into the same community, under circumstances which rendered their contact inevitably productive of collision. The difference of language from the first kept them asunder. It is not anywhere a virtue of the English race to look with complacency on any manners, customs, or laws, which appear strange to them; accustomed to form a high estimate of their own superiority they take no pains to conceal from others their contempt and intolerance of their usages. They found the French Canadian filled with an equal amount of national pride; a sensitive, but inactive pride, which disposes that people not to resent insult, but rather to keep aloof from those who would keep them under. The French could not but feel the superiority of English enterprise; they could not shut their eyes to their success in every undertaking in which they came into contact, and to the constant superiority which they were acquiring. They looked upon their rivals with alarm, with jealousy, and, finally, with hatred. The English repaid them with a scorn, which soon also assumed the same form of hatred. The French complained of the arrogance and injustice of the English; the English accused the French of the vices of a weak and conquered people, and charged them with meanness and perfidy. The entire mistrust which the two races have thus learned to conceive of each other's intentions, induces them to put the worst construction on the most innocent conduct; to judge every word, every act, and every intention unfairly; to attribute the most odious designs, and reject every overture of

kindness or fairness, as covering secret designs of treachery and malignity.

"Religion formed no bond of intercourse and union. It is, indeed, an admirable feature of Canadian society, that it is entirely devoid of any religious dissensions. Sectarian intolerance is not merely not avowed, but it hardly seems to influence men's feelings. But though the prudence and liberality of both parties has prevented this fruitful source of animosity from embittering their quarrels, the difference of religion has in fact tended to keep them asunder. Their priests have been distinct; they have not met even in the same church.

"No common education has served to remove and soften the difference of origin and language. The associations of youth, the sports of childhood, and the studies by which the character of manhood is modified, are distinct and totally different. In Montreal and Quebec there are English schools and French schools; the children in these are accustomed to fight nation against nation, and the quarrels that arise among boys in the streets usually exhibit a division into English on one side, and French on the other.

As they are taught apart, so are their studies different. The literature with which each is the most conversant, is that of the peculiar language of each; and all the ideas which men derive from books, come to each of them from perfectly different sources. The difference of language in this respect produces effects quite apart from those which it has on the mere intercourse of the two races. Those who have reflected on the powerful influence of language on thought, will perceive in how different a manner people who speak in different languages are apt to think; and those who are familiar with the literature of France, know that the same opinion will be expressed by an English and French writer of the present day, not merely in different words, but in a style so different as to mark utterly different habits of thought. This difference is very striking in Lower Canada; it exists not merely in the books of most influence and repute, which are of course those of the great writers of France and England, and by which the minds of the respective races are formed, but it is observable in the writings which now issue from the colonial press. The articles in the newspapers of each race, are written in a style as widely different as those of France and England at present; and the arguments which convince the one, are calculated to appear utterly unintelligible to the other.

"The difference of language produces misconceptions yet more fatal even than those which it occasions with respect to opinions; it aggravates the national animosities, by representing all the events of the day in utterly different lights. The political misrepresentation of facts is one of the incidents of a free press in every free country; but in nations in which all speak the same language, those who receive a misrepresentation from one side, have generally some means of learning the truth from the other. In Lower Canada, however, where the French and English papers represent adverse opinions, and where no large portion of the community can read both languages with ease, those who receive the misrepresentations are rarely able to avail themselves of the means of correction. It is difficult to conceive the perversity with which misrepresentations are habitually made, and the gross delusions which find currency among the people: they thus live in a world of misconceptions, in which each party is set against

the other, not only by diversity of feelings and opinions, but by an actual belief in an utterly different set of facts.

The differences thus early occasioned by education and language, are in nowise softened by the intercourse of after-life; their business and occupations do not bring the two races into friendly contact and co-operation, but only present them to each other in occasional rivalry. They rarely meet at the inns in the cities; the principal hotels are almost exclusively filled with English and with foreign travellers; and the French are, for the most part, received at each other's houses, or in boarding-houses, in which they meet with few English.

Nor do their amusements bring them more in contact. Social intercourse never existed between the two races in any but the higher classes, and it is now almost destroyed. I heard of but one house in Quebec in which both races met on pretty equal and amicable terms, and this was mentioned as a singular instance of good sense on the part of the gentleman to whom it belongs. At the commencement of Lord Aylmer's administration, an entertainment was given to his lordship by Mr. Papineau, the Speaker of the House of Assembly. It was generally understood to be intended as a mark of confidence and good-will towards the governor, and of a conciliatory disposition. It was given on a very large scale, a very great number of persons were present; and of that number, I was informed by a gentleman who was present, that he and one other were the only English except the governor and his suite. Indeed the difference of manners in the two races renders a general social intercourse almost impossible.

"A singular instance of national incompatibility was brought before my notice, in an attempt which I made to promote an undertaking, in which the French are said to take a great deal of interest. I accepted the office of President of the Agricultural Association of the district of Quebec, and attended the show previous to the distribution of the prizes. I then found that the French farmers would not compete even on this neutral ground with the English; distinct prizes were given, in almost every department to the two races; and the national ploughing matches were carried on in separate and even distant fields.

"While such is their social intercourse, it is not to be expected that the animosities of the two races can frequently be softened by the formation of domestic connections. During the first period of the possession of the colony by the English, intermarriages of the two races were by no means uncommon; but they are now very rare.

"I could mention various slight features in the state of society, which show the all-pervading and marked division of the races; but nothing (though it will sound paradoxical) really proves their entire separation so much as the rarity, nay almost total absence, of personal encounters between the two races. Disputes of this kind are almost confined to the ruder order of people, and seldom proceed to acts of violence. As respects the other classes, social intercourse between the two races is so limited, that the more prominent or excitable antagonists never meet in the same room. It came to my knowledge that a gentleman, who was for some years a most active and determined leader amongst the English population, had never once been under a private roof with French Canadians of his own rank in life, until he met some at table on the invitation of persons

attached to my mission, who were in the habit of associating indifferently with French and English. There are, therefore, no political personal controversies. The ordinary occasions of collision never occur, and men must quarrel so publicly, or so deliberately, that prudence restrains them from commencing individually, what would probably end in a general and bloody conflict of numbers. Their mutual fears restrain personal disputes and riots, even among the lower orders; the French know and dread the superior physical strength of the English in the cities; and the English in those places refrain from exhibiting their power, from the fear of the revenge that might be taken on their countrymen, who are scattered over the rural parishes.

"This feeling of mutual forbearance extends so far as to produce an apparent calm with respect to public matters, which is calculated to perplex a stranger who has heard much of the animosities of the province. No trace of them appears in public meetings; and these take place in every direction, in the most excited periods, and go off without disturbance, and almost without dissent. The fact is, that both parties have come to a tacit understanding, not in any way to interfere with each other on these occasions; each party knowing that it would always be in the power of the other to prevent its meetings. The British party consequently have their meetings; the French theirs; and neither disturb the other. The complimentary addresses which I received on various occasions, marked the same entire separation, even in a matter in which it might be supposed that party feeling would not be felt, or would from mere prudence and propriety be concealed. I had from the same places, French and English addresses, and I never found the two races uniting, except in a few cases where I met with the names of two or three isolated members of one origin, who happened to dwell in a community almost entirely composed of the other. The two parties combine for no public object; they cannot harmonize even in associations of charity. The only public occasion on which they ever meet, is in the jury-box; and they meet there only to the utter obstruction of justice."

With these grave obstacles her majesty's government have, at the present moment, to contend. It is well known to be the anxious desire of the Queen, that justice should be administered with entire impartiality to all classes of her majesty's subjects; that a faithful discharge of public duties, and exemplary conduct in private life, are the only means by which the honours and favours of the crown can be obtained, and the support of the British government secured. The old system of "*Divide et Impera*" has passed away, alike at home, and in the colonies; but a system which was founded in fear, and perpetuated by injustice, has necessarily entailed evils which render good government for all classes a matter of great difficulty. There has been no disposition on the part of the British nation to retain Canada in leading-strings; the feelings of nationality always so strong in English hearts, has prevented the growth

of petty jealousies, and taught them to look with affectionate solicitude on the proceedings of a province which they have long considered an important and integral part of the British Empire. The queen and the Imperial Legislature, therefore, freely bestowed on Canada a more independent constitution than was ever before given by any parent state to its colony, and the Canadians now possess perfect freedom in the management of their local affairs. Instead of seeking to maintain a superiority in the Colonial Legislature, the Anglo-Saxon would do well to recollect the evils which resulted after the Norman conquest of England from the dominance of a race, and the indulgence of strong prejudices and cherished antipathies. Ireland, too, offers another illustration of the injurious consequences attendant on political or social subjugation, and a proof that the continuance of such a state of things is, in the long run, alike injurious to the dominant and to the subjugated race, and is, evidently, incompatible with national liberty or progress.

The present is a most critical period for Canada: everything, under Providence, now depends on tranquillity being not merely temporarily restored, but established on a satisfactory basis. Thus only can the extraordinary resources of the province be developed—the English capitalist induced to invest monies in projected railways and canals—and the respectable, intelligent, and order-loving class of emigrants to select Canada for the scene of present labour, the home of their families, and the country of their adoption. Great forbearance on all sides is absolutely essential, whether among political parties in England, or between those of Anglo-Saxon or of Norman descent—all are, in truth, citizens of the same state, with interests, which, to a great extent, are necessarily identical—their individual prosperity being closely allied with that of their common country, whose welfare must inevitably be impeded by their dissensions, and would be materially promoted by their cordial union. Many circumstances, but, above all, the growing influence of Christianity, and the extension of education founded on its principles, justify the hope that the Canadians, who have long been respected for their tried loyalty and exemplary conduct in a domestic sphere, may, ere long, prove their appreciation of the relative duties of public life—and to the high character they have long borne of faithful subjects, good

husbands, and affectionate fathers, add that of peaceable and united citizens. This seems to be the only requisite now wanting to the welfare of their highly-favoured country; and may heaven grant to all concerned in it, the self-denial, forbearance, and Christian charity necessary to its attainment.

GOVERNMENT.—When Canada was in the possession of the French, the form of government was a pure despotism. In 1774 the first British Act of Parliament was passed, fixing the boundaries of Canada—making provision for the better government of this part of his majesty's dominions, and vesting the authority in a governor, aided by a Council of not fewer than 17, and not more than 23 persons, who had power to frame ordinances, but not to levy taxes, except for making public roads, and erecting a few local structures. By this act the English criminal law was preserved; but it was enacted, that "in all matters of controversy, relative to property and civil rights, resort should be had to the rule and decision of the laws of Canada"—excepting, however, from this concession to French law, "lands which had been or should be granted in free and common soccage." The Roman Catholic religion, with all its immunities and rights, was secured to those of the Canadians who professed that faith.

After an interval of 17 years, this act was followed by Mr. Pitt's, or rather Lord Grenville's Act, styled the Constitution of 1791, under the provisions of which, Canada was divided into Upper and Lower provinces.

Eastern or Lower Canada received by this act a constitution, consisting of a Governor and Executive Council of 11 members, appointed by the crown (similar to the Privy Council in England)—a Legislative Council appointed by mandamus from the king, forming the second estate, and at that time consisting of 15 members, but subsequently increased to 34, and a Representative Assembly, or third estate, composed of 50 members, and consisting of 4 citizens from each of the cities of Quebec and Montreal,—3 burgesses, viz., 2 for the town of Three Rivers, and 1 for William Henry, and the remaining number divided over the province as knights of the shire, representing 20 counties, into which Lower Canada was divided. Population was partly made the basis for regulating the division: thus a small and thickly-peopled territory on the banks of the St. Lawrence was found sufficient to form a county, and in the more

distant parts, large areas were included in one county, in order to obtain the amount of population necessary to a representative election. The unsatisfactory manner in which this division into 21 counties operated, from its having regard to population and not to area, was felt after a few years; and it was set aside by the provincial act of 9 Geo. IV., which subdivided Eastern Canada into 40 counties. The constitution of the Eastern province as then regulated, may be thus summarily stated.

The authority of the sovereign in Canada was limited solely by the laws of Great Britain, and by the capitulations of the province. The supreme legislative authority was vested in the crown and in the two houses of the Imperial Parliament: this authority being limited by the capitulations, and by its own acts; the most remarkable of which is the act 18 Geo. III. cap. 12, confirmed by 31st Geo. III. cap. 13, which declares that "no taxes shall be imposed on the colonies but for the regulation of trade, and that the proceeds of such taxes shall be applied to, and for the use of the province, in such manner as shall be directed by any law or laws which may be made by his majesty, his heirs or successors, by and with the advice and consent of the Legislative Council and Assembly of the province."

The Provincial Legislature consisted of the sovereign, acting by the governor-general of the province; of a Legislative Council of 34 members, appointed by the crown for life; of a House of Assembly, of 88 members, elected for 4 years by British subjects resident within the province, under a 40s. tenure. The constituency of Eastern Canada was very widely diffused—among half a million of people there were at least 80,000 electors, of whom nine-tenths were proprietors of the soil; several counties had from 4 to 5,000 electors, all of whom were landed proprietors. The total number of proprietors of real property in 1831, was 57,891; and of persons holding property not otherwise than real, 25,208.

No religious disabilities existed as to electors; but clergymen or Jews were not eligible as representatives. The Assembly was empowered to make laws for the peace, welfare, and good government of the province, such laws not being inconsistent with the Act of 31 Geo. III., cap. 81. The elections were and still are conducted by open voting.

The governor, in the name of the sovereign, assembled, prorogued, and dissolved

the Parliament, which by the law was convened once in every twelve calendar months. All questions arising in either of the two houses, were decided by the open voting of the majority of the members present. The governor gave, withheld, or reserved for the further signification of the pleasure of the sovereign, the royal sanction to bills proposed by the two other branches. Laws assented to by the governor-general, must be disallowed by the crown within two years. The crown could not assent to any act or acts affecting the dues of the clergy of the church of Rome, or the established church of England within the province, or the provisions made for the same, or the enjoyment or exercise of any religious form or mode of worship, or creating penalties, burthens, disabilities, or disqualifications on that account, or granting, or imposing any new dues in favour of any ministers of any former mode of worship, or affecting the prerogative, touching the granting of the waste lands of the crown; until such acts shall have been at least 30 days before both Houses of the British Parliament, without either of the houses having addressed his majesty praying him not to sanction the same.

In Western or Upper Canada, the government had been administered since 1791 by a lieutenant-governor, Executive and Legislative Councils, and a House of Assembly or Representatives, under regulations similar to those in Eastern Canada. The Executive Council consisted of six members chosen by the crown.

When the rebellion broke out in Eastern Canada, in 1837, the Sovereign and Parliament of England, by virtue of its authority, suspended the constitution of the province, (as stated in the history of the colony, p. 80), and the re-union of Eastern and Western Canada having been agreed to by the Parliament of Western Canada, and by the Council of Eastern Canada, Lord Sydenham framed the act of union, which was adopted by the Imperial Legislature. Under the provisions of that act the affairs of the colony are now conducted; and the executive authorities are subject to the regulations laid down by Lord John Russell in October 1839—as stated at pages 39, 40—by which "responsible" or constitutional government has been fully granted to Canada. The act of union (c. xxxv., 3 and 4 Vic., 23rd of July, 1840), recites that for the good government of the provinces for securing the rights and liberties

of all classes of her majesty's subjects, it was necessary to re-unite the two provinces and form one province, for the purpose of executive government and legislation; such union to be declared by proclamation under the advice of her majesty's Privy Council. Various previous acts of Parliament were repealed, and the legislature of the United province was in future to be formed of one Legislative Council and one Assembly. The Legislative Council to consist of not fewer than 20 persons, of 21 years of age, subjects of the crown, and summoned for life by the governor-general, under authority of the sign manual of the sovereign. Such legislative councillor may resign, but if he absent himself from two successive sessions of the legislature of the province, "without the permission of her majesty, or of the governor of the said province, signified by the said governor to the Legislative Council, or shall take any oath or make any declaration or acknowledgment of allegiance, obedience, or adherence to any foreign prince or power, or shall do, concur in, or adopt any act whereby he may become a subject or citizen of any foreign state or power, or whereby he may become entitled to the rights, privileges, or immunities of a subject or citizen of any foreign state or power, or shall become bankrupt, or take the benefit of any law relating to insolvent debtors, or become a public defaulter, or be attainted of treason, or be convicted of felony, or of any infamous crime, his seat in such council shall thereby become vacant."

Any question arising respecting vacancies in the Legislative Council of the province of Canada, occasioned by any of the matters aforesaid, must be referred by the governor to the Legislative Council, to be by the said Legislative Council heard and determined, but the person respecting whose seat such question shall have arisen, or her majesty's attorney-general for the said province on her majesty's behalf, may appeal from the determination of the said Council in such case to her majesty, and the judgment of her majesty given with the advice of her Privy Council thereon shall be final and conclusive to all intents and purposes.

The governor has authority from time to time, by an instrument under the great seal of the said province, to appoint one member of the Legislative Council to be speaker thereof, and to remove him, and appoint another in his stead.

The presence of at least ten members of

the said Legislative Council, including the speaker, is necessary to constitute a meeting for the exercise of its powers; and all questions are decided by a majority of voices of the members present except the speaker; when the voices are equal the speaker has the casting vote.

For the purpose of constituting the Legislative Assembly of the province of Canada, the governor, from time to time, as occasion may require, in her majesty's name, and by an instrument or instruments under the great seal of the said province, has power to summon and call together a Legislative Assembly in and for the said province.

The qualification for voters is property to the yearly value of 40s. in the counties; of £5 in the towns, or paying rent to the amount of £10, annually. In Western Canada 41 electoral districts, containing 723,087 inhabitants, return 42 members to the House of Assembly; the city of Toronto sends two members; the cities of Hamilton and Kingston, each one, and the towns of London, Cornwall, Bytown, Niagara, and Brockville, each one member. The North, South, East, and West Ridings of York return each one member; each of the other counties of the province are represented by one member. In Eastern Canada, 768,334 inhabitants return 42 members to the House of Assembly, from 40 electoral districts. Montreal and Quebec return each two members, the towns of Three Rivers and Sherbrooke, each one, and every county one member.

The property qualification of a representative is the possession for his own use of £500, in lands or tenements, over and above all rents, charges, mortgages, and incumbrances. The Assembly is convened for a term of 4 years, and must be called together once in each year; 20 members constitute a quorum, and the Assembly chooses its own speaker, who has a casting vote. By the act of union it is declared "that within the province of Canada, her majesty shall have power, by and with the advice and consent of the said Legislative Council and Assembly, to make laws for the peace, welfare, and good government of the province of Canada, such laws not being repugnant to this act, or to such parts of the said act passed in the thirty-first year of the reign of his said late Majesty as are not hereby repealed, or to any act of Parliament made or to be made, and not hereby repealed, which does or shall, by express enact-

ment or by necessary intendment, extend to the provinces of Upper and Lower Canada, or to either of them, or to the province of Canada; and that all such laws being passed by the said Legislative Council and Assembly, and assented to by her majesty, or assented to in her majesty's name by the governor of the province of Canada, shall be valid and binding to all intents and purposes within the province of Canada."

The members of the House of Assembly, are allowed by grants of the legislature, an indemnity of 10s. currency per diem, and 4s. per league as travelling expenses from their places of residence, to where the sittings of the legislature are held. The session of Parliament generally lasts three months, seldom more than four, and is held during the winter. The salary of the speaker of the House of Assembly is £900, voted annually by the Provisional Legislature.

The Legislative Council at present consists of about 45 members, of whom 12 were added by Lord Elgin, 6 by Lord Metcalfe, 5 by Sir C. Bagot, and the others nominated by Lord Sydenham. The crown has an unlimited power of nomination. Nearly half the Legislative Council consists of gentlemen of French origin. The Executive Council comprises 11 ministerial officers—including two secretaries, and two attorneys and solicitors-general for Eastern and for Western Canada—a receiver-general, inspector-general, president of committees, and commissioner of crown lands, and speaker, all appointed by the governor, but who must be possessed of seats in the House of Assembly in order to make them responsible to the people, and produce harmony between the executive and the legislature. The governor of Canada is governor-general of all the British possessions in North America, and commander-in-chief of all the forces there, but in the latter capacity he only acts ministerially.

Governors of Canada.

- 1663. Sieur de Mézy.
- 1665. Sieur de Courcelles.
- 1672. Sieur de Frontenac.
- 1682. Sieur de la Barre.
- 1685. Marquis de Denonville.
- 1689. Sieur de Frontenac.
- 1699. Chevalier de Callières.
- 1703. Marquis de Vaudreuil.
- 1726. Marquis de Beauharnois.
- 1747. Comte de la Galissonnière.
- 1749. Sieur de la Jonquière.
- 1752. Marquis du Queane de Menneville.
- 1755. Sieur de Vaudreuil de Cavagnal.
- 1766. James Murray.

- 1766. Paulus Emilia Irving (President)
- General Guy Carleton.
- 1770. Hector T. Cramahé (President).
- 1774. General Guy Carleton.
- 1778. Frederick Haldimand.
- 1774. Henry Hamilton (Lieutenant-Governor).
- 1775. Henry Hope (Lieutenant-Governor).
- 1776. Lord Dorchester (Sir Guy Carleton).
- 1791. Colonel Clarke (Lieutenant-Governor).
- 1793. Lord Dorchester
- 1796. Robert Prescott
- 1799. Sir R. S. Milnes, Bart. (Lieutenant-Governor).
- 1805. Hon. Thomas Dunn (President).
- 1807. Sir J. H. Craig, K.B.
- 1811. Hon. Thomas Dunn (President).
- Sir George Prevost.
- 1816. Sir G. Drummond, G.C.B. (Administrator).
- 1816. John Wilson (Administrator).
- Sir J. C. Sherbrooke.
- 1818. Duke of Richmond.
- 1819. Hon. James Monk (President).
- 1820. Sir Peregrine Maitland.
- Earl Dalhousie, G.C.B.
- 1824. Sir F. N. Burton (Lieutenant-Governor).
- 1825. Earl Dalhousie.
- 1828. Sir James Kempt, G.C.B. (Administrator).
- 1830. Lord Alymer, G.C.B. (Administrator).
- 1835. Earl of Gosford.
- 1838. Major-General Sir John Colborne (Administrator).
- Earl of Durham (six months).
- Major-General Sir John Colborne (Administrator).
- 1839. Right Hon. P. Thomson (afterwards Lord Sydenham).

Provinces United.

- 1841. Lord Sydenham.
- Major-General Sir R. Jackson (Administrator).
- 1842. Sir Charles Bagot.
- 1843. Sir Charles (afterwards Baron) Metcalfe.
- 1845. Earl Cathcart.
- 1847. Earl of Elgin and Kincardine.

Lieutenant-Governors of Upper or Western Canada.

- 1792. Colonel Simcoe.
- 1796. Hon. Peter Russell (President).
- 1799. Lieut.-Gen. Peter Hunter.
- 1805. Hon. A. Grant (President).
- 1806. Francis Gore.
- 1811. Major-Gen. Sir Isaac Brock (President).
- 1812. Major-Gen. Sir R. H. Sheaffe, Bart. (President).
- 1813. Maj.-Gen. F. Baron de Rottenberg (President).
- Lieut.-Gen. Sir Gordon Drummond, K.C.B.
- 1816. Lieut.-Gen. Sir George Murray, Bart.
- Major-Gen. Sir F. P. Robinson, K.C.B.
- Francis Gore.
- 1817. Hon. Samuel Smith (Administrator).
- 1818. Major-Gen. Sir Peregrine Maitland.
- 1820. Hon. Samuel Smith (Administrator).
- Major-Gen. Sir Peregrine Maitland.
- 1828. Major-Gen. Sir John Colborne.
- 1836. Sir F. B. Head.
- 1838. Major-Gen. Sir G. Arthur.

THE LAWS now in force in Eastern or Lower Canada are:—1st. The acts of the British Parliament which extend to the colonies: 2nd. Capitulations and treaties: 3rd. The laws and customs of Canada,

founded principally on the jurisprudence of the Parliament of Paris, as it stood in 1663, the edicts of the French kings, and their colonial authorities, and the Roman civil law: 4th. The criminal law of England, as it stood in 1774, and as explained by subsequent statutes: 5th. The ordinances of the governor and council, established by the act of the above year: 6th. The acts of the Provincial Legislature since 1792. These laws are executed in her majesty's name, and in virtue of her commission and instructions, by the governor, or person administering the government, through the agency of several inferior officers, all of whom are appointed during pleasure. The governor besides possesses all other powers and prerogatives generally, which her majesty may legally enjoy, and may delegate to him. The *judiciary* consists of a High Court of Appeal, a Court of Queen's Bench in Eastern and Western Canada, presided over by a chief justice in each province, and several puisné justices. There are provincial courts for trials of causes above £10.

There are also a Court of Vice-Admiralty, Quarter Sessions, and other minor tribunals for civil matters. The Court of Appeal, the highest legal tribunal in the province, consists of the governor, president *ex officio*, the chief justices of the province, all the members of the Executive Council, five of whom, including the president, are a competent quorum to hear and determine appeals from judgment pronounced in the Court of Queen's Bench in civil matters. Should the matter in dispute exceed £500 in value, an appeal lies to the queen and Privy Council; if below that sum, the decision of the Canadian High Court of Appeal is final.

The Canadian Court of Queen's Bench combines a jurisdiction similar to those of the Queen's Bench and Common Pleas at Westminster; it has distinct civil and criminal terms, and an appellate as well as an original jurisdiction; appeals lying, in certain cases, from the decisions of the provincial judges, or inferior courts, over each of which a puisné judge presides.

The duties of the Vice-Admiralty Court devolve, by commission, on a Judge Surrogate, who is also a judge of the Court of Queen's Bench.

The Court of Escheats was created by the 10th sec. 6 Geo. II. c. 59; it consists of Commissioners appointed by the governor to inquire, on information being filed by the

attorney-general, into the liability of lands to be escheated, by reason of the non-performance of the conditions on which they were granted. The decision is given by a verdict of a jury composed of twelve men, summoned in the usual way; and the lands forfeited become re-vested in the Crown.

The other courts being similarly constituted to those of the same name in England, require no explanation. The police of the country is supervised by unpaid justices of the peace (the members of the Executive and Legislative Councils, the judges, &c., are everywhere justices of the peace *ex officio*). Trial by jury is universal in all criminal cases; but in civil matters the appeal to this mode of trial in Eastern Canada is confined by statute to certain cases, viz., the demand must exceed £10, the parties being merchants or traders, and the subject matter grounded on debts, promises, contracts, and agreements, of a mercantile nature only; or else the action must arise from personal wrongs, to be compensated in damages; in all other causes the Bench are judges both upon the law and the fact; a very small portion of these cases are tried by jury.

The criminal law of Canada is in general conformity to that of England, with some provincial statutes not repugnant thereto. The admiralty and commercial laws are also English. In the civil law the proceedings are carried on both in the French and English languages, and it is not unusual to have half the jury French and the other half English.

Litigation is frequent; there are about 200 lawyers in Eastern Canada on the rolls of the Court of Queen's Bench, who are solicitors and proctors as well as barristers; the notaries are conveyancers in Eastern Canada, and form a distinct class; they are about 300 in number. In the Quebec district alone there are 45 barristers, 43 solicitors, and 138 notaries. In Montreal district—26 barristers, 60 solicitors, and 164 notaries. In Three Rivers district—72; making a total of 358 lawyers.

In Western Canada the laws are wholly English, and administered by a Court of Queen's Bench, presided over by a chief and 6 puisné judges. The Courts of Quarter Session and Requests are held as in England. There are about 500 unpaid magistrates.

The *judicial establishment* consists, in Eastern Canada, of a Chief Justice of a Court of Queen's Bench at Quebec, and 3

Puisné Judges; a Resident Judge at Three Rivers; a Provincial Judge at St. Francis; and 2 District Judges at Gaspé. There is also a Vice-Admiralty Court, with a Judge and Registrar. In Western Canada the judicial establishment consists of a Chief Justice and 4 Puisné of a Court of Queen's Bench; a Vice-Chancellor and Registrar of a Court of Chancery; and a Court of Probate. There are Circuit Courts in Eastern Canada, and District Courts in Western Canada. In Western Canada there are 4 Commissioners of Bankrupts, independent of the District Judges; in Eastern Canada the Judges appoint Bankrupt Commissioners from barristers of five years' standing, or the District Judges fulfil the duty of Commissioners.

Municipal Institutions of Canada.—It has been truly remarked, that "a more complete municipal system than that in operation in this province, has never been established. The powers conferred on each district are very great, but have been always exercised with discretion. The system was established by Lord Sydenham, to remove from the imperial and the provincial governments the odium which frequently attached to them, in consequence of the legislation and appropriations which affected particular localities. The corporations are composed of members from each township, so many townships forming a district. These form a council, presided over by a warden appointed by the crown. They meet quarterly in the respective court-houses of each district, and determine on all local improvements, roads, harbours, bridges, schools, paving, lighting, cleansing, &c. The vote for township councillor is every householder, and the qualification of a councillor is real estate value £500. The improvements in the respective districts that have been effected since their establishment are quite surprising. Their powers are great, but in no one instance have they been abused. It is in miniature the operation of the government of the respective States of North America, forming the general government of the United States of America."

The Canadians enjoy in its fullest extent the blessing of a constitutional government; they have entire control over their own revenues, and may enact whatever laws are required for their country, provided only that such laws be not injurious to other parts of the empire. Let then the people of *Western* as well as of *Eastern* Canada

avoid all measures and proceedings calculated to diminish the authority and government that has sprung from themselves, and abstain from forming associations, whether under the title of "convention," "league," or any other name, whose tendency is to control the provincial legislature. They would do well to remember and act on the advice of a truly great man, George Washington, who, in his parting address to his countrymen, on the 17th of September, 1796, when declining to be again elected president of the United States republic, adverted to the obedience owed by every individual to the established government, which they had contributed to form, thus emphatically warned the Americans against "conventions," and stated their results as testified in the history of all nations:—

"All obstructions to the execution of the laws, all combinations AND ASSOCIATIONS, under whatever plausible character, with the real character to DIRECT, CONTROL, COUNTERACT OR AWE the REGULAR DELIBERATION AND ACTION of the CONSTITUTED AUTHORITIES, are DESTRUCTIVE of this FUNDAMENTAL principle, and of FATAL TENDENCY. They serve to organise faction, to give it an artificial and extraordinary force; to put in the place of the delegated will of the nation, the will of a party, often a small, but ARTFUL and ENTERPRISING MINORITY of the COMMUNITY; and, according to the alternate triumphs of different parties, to make the public administration the mirror of the ill-concerted and incongruous projects of faction, rather than the organ of consistent and wholesome plans, digested by common counsels, and modified by mutual interests."

"However combinations and associations of the above description may now and then answer popular ends, they are likely, in the course of time and things, to become potent engines, BY WHICH CUNNING, AMBITIOUS AND UNPRINCIPLED MEN WILL BE ENABLED TO SUBVERT THE POWER OF THE PEOPLE, AND TO USURP FOR THEMSELVES THE REINS OF GOVERNMENT; destroying afterwards the very engines which have lifted them to unjust dominion."

Laws of the Feudal Tenures.—When Canada was first settled by the French, the feudal tenure was in full vigour on the continent of Europe, and was naturally transplanted by the colonizers to the new world. The king of France, as feudal lord, granted to nobles and respectable families, or to officers of the army, large tracts of land, termed seignories, the proprietors of which were and still are termed seignors; these possessions are held immediately from the Sovereign, *en fief*, or *en roture*, on condition of the proprietor rendering fealty and homage, on accession to seignorial property; and in the event of a transfer, by sale, or gift, or otherwise (except in hereditary succession), the seignory is subject to the pay-

ment of a *quint*, or fifth part of the whole purchase-money, which, if paid by the purchaser immediately, entitles him to the *rabat*, or a reduction of two-thirds of the *quint*.

Quints are a fifth part of the purchase-money of an estate held *en fief*, which must be paid by the purchaser to the feudal lord, that is, the sovereign. If the feudal lord believes the *fief* to be sold under value, he can take the estate to himself, by paying the purchaser the price he gave for it, together with all reasonable expenses. The committee of the House of Commons in their Report on the affairs of Canada, in 1828, recommended the crown to relinquish the *quints*. *Relief* is the rent or revenue of one year for mutation fine, when an estate is inherited only by collateral descent. *Lods et ventes* are fines of alienation of one-twelfth part of the purchase-money paid to the seigneur by the purchaser on the transfer of property, in the same manner as *quints* are paid to the sovereign on the mutation of *fief*; and are held *en roture*, which is an estate to which heirs succeed equally. *Franc aleu noble* is a *fief*, or freehold estate, held subject to no seignorial rights or duties, and acknowledging no lord but the sovereign. The succession to *fiefs* is different from that of property held *en roture* or by *villainage*. The eldest son, by right, takes the chateau, and the yard adjoining it; an *arpent* of the garden which joins the manor-house, and the mills, ovens, or presses, within the seignory, belong to him; but the profit arising from these is to be divided among the other heirs. Females have no precedence of right, and when there are only daughters, the *fief* is equally divided among them. When there are only two sons, the eldest takes two-thirds of the lands, besides the chateau, mill, &c., and the younger one-third. When there are several sons, the elder claims half the lands, and the rest have the other half divided among them. *Censive* is an estate held in the feudal manner, subject to the seignorial fines or dues. All the Canadian *habitans*, small farmers, are *censitaires*. Property, according to the laws of Canada, is either *propre*, that is held by descent, or *acquise*, which expresses being acquired by industry or other means. *Communauté du bien* is partnership in property by marriage; for the wife, by this law, becomes an equal partner in whatever the husband possessed before, and acquires after, marriage, and the husband is placed in the same position in respect to the wife's dowry.

This law might operate as well as most general laws do, if both *mari* and *femme* died on the same day; but as that is seldom the case, very unhappy consequences have arisen from it. For instance, when the wife dies before the husband, the children may claim half of the father's property, as heirs to the mother; and the mother's relations have often persuaded, and sometimes compelled them so to do.

The *dot* or dowry, is the property which the wife puts into the *communauté du bien*: movable or immovable property, falling to her by descent, is a *propre*, and does not merge in the *communauté*. Dower in Canada is either customary or stipulate. The first consists of half the property which the husband was possessed of at the time of marriage, and half of all the property which he may inherit or acquire—of this the wife has the use for life, and the children may claim it at her death. If they be not of age, the wife's relations, as guardians of the children, can take it out of the father's hands, and may compel him to sell his property to make a division. Stipulated dower is a portion which the husband gives instead of the customary dower.

The Canadian farms are remarkable for the small breadth of the farm on the bank of the river, and its great depth inland; the latter being often in proportion to the former as 60 to 1, namely, half an arpent broad in front of the St. Lawrence, or other river, and 30 arpents in depth.

Those farmers who hold land from the seigneur *en route*, and who are termed *tenanciers* or *censitaires*, are subject to certain conditions, viz., a small annual rent, from 2s. 6d. to 5s. (or perhaps more of late years) for each arpent in front; to this are added some articles of provision annually—such as a pig or goose, or a few fowls, or a bushel of wheat, according to the means of the farmer, who is also bound to grind his corn at the *moulin banal*, or the seigneur's mill, where one-fourteenth is taken for the lord's use, as *mouture* or payment for grinding. The *lods et ventes* form another part of the seigneur's revenue: it consists of a right to one-twelfth part of the purchase-money of every estate within his seignory, that changes its owner by sale, or other means equivalent to sale: this twelfth to be paid by the purchaser is exclusive of the sum agreed on between him and the seller, and if promptly paid, a reduction of one-fourth is usually made, in the same manner as

two-thirds of the *quints* due to the crown are deducted on prompt payment. On such an occasion a privilege remains with the seigneur, but is seldom exercised, called the *droit de retrait*, which confers the right of pre-emption at the highest price offered, within 40 days after the sale has taken place.

All the fisheries within the seignories contribute also to the lord's income, as he receives a share of the fish caught, or an equivalent in money: the seigneur is also privileged to fell timber any where within his seignory, for the purpose of erecting mills, constructing new or repairing old roads, or for other works of public and general utility. In addition to the foregoing burdens on the farmer, he is, if a Roman Catholic, bound to pay to his curate one twenty-sixth part of all grain produced, and to have occasional assessments levied on him for building and repairing churches, parsonage houses, &c.

The duties of the seigneur to his tenants are also strictly defined—he is bound in some instances to open roads to the remote parts of his fief, and to provide mills for the grinding of the feudal tenants' corn—he cannot dispose by sale of forest lands, but is bound to concede them; and upon his refusal to do so, the applicant may obtain from the crown the concession he requires, under the usual seignorial stipulations, in which case the rents and dues appertain to the sovereign.

According to the *Contume de Paris*, the "Franc aleu roturier est terre sans justice ou seigneurie pour laquelle le detenteur ne doit cens, rentes, lods et ventes, ni autres redevances;" and the soccage tenure, like *franc aleu roturier*, leaves the farmer or landholder wholly unshackled by any conditions whatsoever, as to rents, corvees, mutation fines, *banale* (corn grinding obligation), without in fact any other obligation than allegiance to the sovereign, and obedience to the laws. The quantity of land thus granted in Eastern Canada amounts to upwards of 7,000,000 acres—while under the seignorial grants nearly 11,000,000 acres are held by a large number of small proprietors.

The British government have long been desirous of converting the seignorial into soccage tenures, but nothing compulsory has been attempted. In 1825 an act was passed (6 Geo. IV. c. lix.) for the gradual extinction of the feudal rights, and enabling seigneurs to release themselves from the

feudal burthens (*quints*, &c.) due to the crown, and for granting their lands in free and common soccage to tenants, who were also to be released from their feudal burthens; which act, while it provided for the voluntary surrender by the seigneur of his rights, also gave the tenant in fief a power to claim exemption of burthens from the seigneur; who, on refusal, was subject to be impleaded in a court of law, and bound, on a commutation fixed and given, to grant his lands on soccage tenures. But this act has, with two exceptions, been of no effect; the Canadians are peculiarly attached to ancient customs—they contend that a conversion of tenure is equivalent to a conversion of law, as the descent by inheritance would be altered, and with it the whole body of the law applicable to real property. It is, therefore, probable that the old tenures, *en roture*, will remain, and those in soccage are not likely to be converted into the former, at least, by the present generation.

The Position and Extent of the Seignorial Grants are stated to be:—

Territorial Division.	Number of Seignories.	Extent of Seignorial Grants.		Almost unfit for cultivation in the Seignories and Fiefs.
		Arpents	Acres.	
Quebec, including Anticosti and other Isles	79	5,639,319	5,656,699	2,600,000
Montreal and Islands	63	3,269,966	2,786,011	500,000
Three Rivers and St. Francis, &c.	25	1,220,308	1,039,707	400,000
Gaspé and Isles . . .	1	1,547,386	1,318,117	600,000
Total	168	11,676,679	10,800,534	4,100,000

RELIGION.—The prevailing form of Religion in Eastern Canada is that of the Romish church, whose clergy are educated in Canada, and have no civil or secular connexion with the pope; they are not paid by government, but have for their support the twenty-sixth part of all the grain raised on the lands of the catholics. Hay and potatoes are exempted from the charge, and if a catholic turn protestant, or sell his lands to a protestant, the estate is no longer subject to this moderate burden. The church is governed by a bishop (a Canadian born and educated), who receives, in addition to the rent of some lands of little value, a stipend of £1000 per annum, from Great Britain. The incomes of the *curés* average £300 per annum, by which

they are enabled to live respectably, and even hospitably; and so long as they confine themselves to their religious duties, they invariably meet with the respect which piety and philanthropy everywhere deserve. Great attention is paid to the observances of religion by people of every persuasion, in both Eastern and Western Canada.

The revenues of the Romish Church in Eastern Canada are considerable.

Mr. Adam Thom, in the letters written under the signature of "Camillus," in 1839, stated their seigniorial rights to extend over:

	Sq. miles.
1. The island and city of Montreal	200
2. The Lake of Two Mountains and augmentation	140
3. St. Sulpice	110
[Belong to Seminary of Montreal.]	
4. Chateauguay (Grey Sisters)	54
5. Isle-Jesus	50
6. Cote de Beaupré (Seminary of Quebec.)	900
7. Isle aux Coudres	10
8. St. Jean (Ursal. of Three Rivers)	20
9. St. Augustin (Religieuses de l'hôp. of Quebec, 34	
10. D'Orsanville (Religieuses)	4

1522

Besides the above-mentioned rights, extending over nearly a million of acres, these and other ecclesiastical institutions possess property of great value in Quebec and Montreal, and elsewhere.

Several religious communities exist, viz.: the *Hotel Dieu de Montreal*, founded in 1664; the *Congregation de Notre Dame de Montreal*; the *Hopital-general de Montreal*; the *Hotel Dieu de Quebec*; the *Ursulines de Quebec*, and the *Hopital-general de Quebec*; all these establishments have novices and postulants, and it is but justice to add, that the nunneries of Eastern Canada are exemplary in their management, and remarkable for the piety and charity of their inmates. There are several missions, protestant and Roman catholic, among the Indians at their different stations, especially in Western Canada. There is no dominant church in Canada.

The number and designation of the ministers of the Christian religion in Canada, are stated in the official returns made to government, to have been as follows in 1847:—

Church of England in Eastern Canada.—A lord bishop of Montreal, and an archdeacon of Quebec. Of parochial and other clergy in Quebec district, about 15; ditto of Three Rivers, 4; ditto of Montreal, 42; ditto of St. Francis, 10; ditto of Gaspé, 3; the congregations are, in number 180, and the ministers

officiating, whose names and stations are furnished in the returns, 75. There are other clergymen, who, though they have not any distinct charge, yet officiate in several places within the province. One is a French protestant missionary.

In the interesting works issued by the truly Christian "Society for the propagation of the Gospel," it is stated, that the province of Canada was first formed into a diocese in the year 1793, under the episcopal superintendence of Dr. Jacob Mountain. In 1826 the Hon. Charles Stewart, the devoted missionary of St. Armand, succeeded to the bishopric of Quebec—and when he was compelled by illness, brought on by his many apostolic labours and journeyings, to return to England in 1836, Dr. G. J. Mountain was consecrated for the administration of the diocese, under the title of bishop of *Montreal*—which title he still retains—though the diocese is properly called the diocese of *Quebec*. This enormous see was divided in the year 1839, when archdeacon Strachan was raised to the bishopric of *Toronto*, comprising the province of *Upper Canada*, or, as it is now called, *Western Canada*.

The diocese of Quebec runs along a narrow strip of land of 600 miles in length, on both banks of the St. Lawrence, and contains an area of 200,000 square miles. The population is estimated at 650,000, about two-thirds of whom are French Roman catholics. The number of English clergy is between 70 and 80.

Church of England in Western Canada.—A lord bishop of Toronto, 2 archdeacons, and 116 parochial clergy, with an equal number of congregations scattered throughout the different districts; of the 116 parochial ministers, 51 are regularly inducted rectors. In addition to the regular station services, almost every clergyman has two or three out services; some being several miles from the chief station. Parsonage houses are increasing by means of private endowments, and by the aid of the Church Diocesan Society; the glebes average about 400 acres (of wild land chiefly) attached to each rectory.

The churches in large towns are spacious; in the districts they contain generally from 300 to 600, and are well attended. Some of the clergy receive allowances from government; others from the "Society for the propagation of the gospel in Foreign Parts," and others are supported by the voluntary contributions of the parishioners.

The Roman Catholic Church in Eastern

Canada consists of three divisions; there are about 300 churches to a population of 600,000.—Montreal district, 2 bishops, 7 vicars-general, and 191 priests. Quebec district, an archbishop, a bishop, 6 vicars-general, and 145 priests. Three Rivers district, 41 priests. Gaspé district, 16. Total, 1 archbishop, 3 bishops, 13 vicars-general, and 379 priests, exclusive of teachers at various colleges.

The Roman Catholic Church in Western Canada consists of 2 bishops, a coadjutor-bishop, 1 archdeacon, 1 rural dean, and 56 priests.

The government allows £1000 a year for the bishop of Quebec, and a sum of about £1,666 is paid by government, to the Roman catholic priests in Western Canada annually.

The Presbyterian Church of Canada, in connexion with the church of Scotland, has 6 presbyteries, and 57 ministers.

The Free Presbyterian Church of Canada—Seven presbyteries, and 51 ministers.

The United Presbyterian Church of Canada.—Five presbyteries, and 33 ministers. Total, 141 ministers in East and West Canada.

The Wesleyan Methodist Churches in Canada, are divided into 6 districts, and have 179 ministers. The same persuasion of the *New Connexion*, have 37 ministers; the *Congregational* denomination, 34; the *Baptists*, 108 ministers.

The relative numbers of each religious persuasion are given in the section on population.

The variety of religious sects in Western Canada, will be seen by the following general numerical return of the several religious bodies in Upper Canada, for the year 1839:

Church of England, 61,788. Methodists, British connexion, 15,795; episcopal, 7,146; Canadian Wesleyan, 2,210; primitive, 106; under the general term of methodists, without distinction, 19,740. Presbyterians, Church of Scotland, 31,448; seceders from the Church of Scotland, 1,507; independents, 777; congregationalists, 701; nonconformists, 18; under the general term of presbyterians, without reference to sects, 31,308. Roman catholics, 29,562. Baptists, returned under the general term of baptists, without reference to distinction, 4,626; open communion, 1,088; close communion, 3,579; free-will, 621. Lutherans, 2,283; Dutch reformed church, 44; menonists, 2,674; tinkers, 925; Moravians, 7; quakers, 4,166; society of peace, 14; universalists, 416;

restorationists, 18; unitarians, 59; latitudinarians, 6; deists, 4; free-thinkers, 75; Irvingites, 188; reformers, 13; christians, 1,291; bible christians, 270; disciples, 336; mormons, 240; other denominations, 6,243; no profession, 27,301.

The payments for ministers of religion out of the public funds, are as follows:—

The Church of England in Western Canada receives £6,668 (from the clergy reserves); this sum provides £100 to £170 a year, for 36 clergymen. Eleven presbyterian ministers, in connexion with the Church of Scotland, receive £641. Nine ministers of late synod of Western Canada, £572. The Roman catholic clergy in Western Canada, £1,500. Eight presbyterian ministers in Eastern Canada, receive £285, and the Roman catholic bishop of Quebec, £1000. The Church of England in Eastern Canada receives £3,020. The total charge for the ecclesiastical establishment of Canada for 1847, was £13,725; of this sum, £3,620 for the bishop and ministers of the Church of England in Eastern Canada, is paid from the military chest, and ceases with the lives of the present parties. The stipend of £1000 a year to the Roman catholic bishop of Quebec, and £100 a year to the presbyterian minister at Argenteuil, are paid from the military chest.

EDUCATION.—Laudable and energetic efforts are now making in Canada, for the education of the people, in Western Canada especially. A new school act was brought into operation in 1847, and the returns under it are yet imperfect for 1847, but the following details are taken from the report of Mr. E. Ryerson, the chief superintendent of schools:—

School Sections, are the smallest municipal school divisions provided for by law, each consisting of such a section of the country as is considered suitable for a school. In each section three persons are elected trustees by the householders, and constitute a corporation for the management of the common school affairs of such section. One of the members of the school corporation retires from office each year, so that each trustee is elected for three years. Or such schools in Western Canada, there are 2727; from 327 sections, no returns received; number of qualified teachers, 2812; number of teachers without certificates, 216. Of 3028 teachers, 2356 were males, and 663 females. Average yearly salaries of teachers £37; number of pupils in the section

schools 124,829, of whom 65,575 were boys, and 55,254 girls. Upwards of 295 *different authors*, or text books are in use in these schools, viz., in spelling 13; reading 107; arithmetic 35; geography 20; history 21; grammar 16; natural philosophy 7; chemistry 5; geometry 2; mental philosophy 3; rhetoric 3; book-keeping 5; botany 2; algebra 2; natural history 1; physiology 2; composition 1; penmanship 4; moral philosophy 2; surveying 3; mensuration 2; declamation 2; dictionaries 4; &c.

Book-keeping is taught in 523 schools; mensuration in 294; algebra in 144; elements of natural philosophy in 77; Latin and Greek in 41; and French in 60 schools; 41,686 pupils study arithmetic; 13,743 English grammar; 10,563 geography; 45,467 writing. The bible and testament are used in 1782 schools,—nearly two-thirds of the common-schools in Upper Canada. Of 2572 school-houses, 49 are brick, 84 stone, 1028 frame, and 1399 log: 1403 schools are freehold, 697 leased, and 171 rented: 699 are in good repair, 817 in ordinary, 347 in a bad condition: 1705 have only one room, 98 more than one room: 1125 are suitably furnished with desks, seats, &c. The total amount of council assessment for 1847, was £22,955; collected by trustees' rate-bills £30,543; legislative grant £21,000. The total amount of money derived from all sources, and expended for the payment of salaries of common school teachers, for 1847, was £77,599. This does not include the moneys expended for the erection, repairs, furnishing, and warming of school-houses, &c. Upper Canada expends of the public moneys, for the common school education of little more than half a million of people, as much as is spent in Ireland for eight million of people.

In Western Canada there are 48 colleges, academies, and high schools. The "Blue Book" for 1847 states the number of school sections for that year, in Western Canada, at 2925; schools reported 2589; children between 5 and 16 taught, 101,912. Legislative school grant £20,851; amount assessed by municipal council £21,871. Paid teachers from school fund £38,521; from rate-bill £29,385; total £67,906.

In Eastern Canada the number of schools under the control of the commissioners for six months, in 1847, was 1611, and there were 21 dissentient; number of children educated 60,685. The allowances for six months were £14,500. The schools are dis-

tributed over 36 counties in Eastern Canada. There are 65 colleges, academies, and high schools.

The votes and grants for education, in 1847, were, in Eastern Canada, £38,888, of which the Jesuit estates yielded £4567. The amount of £32,978 was voted by the legislature for common schools, and £1352 for different colleges in Eastern Canada. The educational votes for 1847, by the Canadian legislature, for Western Canada, amounted to £28,845, of which £23,270 was for common schools.

The lands granted to the Jesuits by the French government, and which lapsed to the British crown on the demise of the last of the Jesuits, in 1800, have been granted for purposes of Education. Under a very bad system of management, these lands did not yield from 1800 to 1831, more than £50,000.

According to a return of the institutions for the instruction of youth in Eastern Canada, it appears that there are the following school foundations:—

"PROTESTANT.—1. Royal Grammar School, Quebec; 200*l.* a year, and 90*l.* a year school-house rent, from Jesuits' estates. Twenty free scholars, 11 pay for their tuition; all day-scholars. Terms: under 19, £8; above 12 and under 13, £10 per an.; above 13, £12 per an. French and English taught; course of instruction as in the grammar schools in the United Kingdom.

"2. Royal Grammar School, Montreal; £200 a year, and £54 a year school-house rent, from Jesuits' estates. Twenty free scholars admitted, 15 scholars pay for their education: all day scholars. Terms: highest £10; lowest £8 per an.; instruction as in grammar-school at Quebec; and this school is in possession of an extensive apparatus for experiments in natural philosophy.

"3. Seminary at Chambly; contributions of students; a private institution lately established under the patronage of the Lord Bishop of Quebec. Board and tuition according to age of student, £40, £50, and £75 per an.; day-scholars £15 and £20 per an. There are 17 boarders and 9 day-scholars. Those who pay £75 per an. are young men studying for holy orders, and others finishing their education.

"CATHOLIC.—1. Seminary of Quebec; no revenues specifically appropriated to the purposes of education, but possessed of several estates. Value, made many years ago, computed at £1,249 a year, besides large contributions in grain, and the *lods et ventes* on mutations of property, which amount to a considerable sum. Attended by 188 students; the terms for tuition and board £17:10*s.* per an.; for tuition only, £1 per an. Poor children instructed gratis. The Seminary of Quebec was erected by letters patent of the French crown, dated in April, 1663.

"2. Seminary at Montreal; in possession of estates valued many years ago at about £2,000 a year, besides large contributions in grain, and *lods et ventes* on mutations of property, which in the seignory of

Montreal, comprehending the whole of the town, must amount to a large sum. Attended by 260 students; terms for board and tuition, per an. £21, for tuition only, £1:15s. Instruction as at the Seminary of Quebec. The ecclesiastics of St. Sulpice, at Paris, were authorized to establish a seminary at Montreal, and allowed to hold the island of Montreal in mortmain, by letters patent of the French crown, dated in May, 1677.

"Seminary at Nicolet; supported principally by private contributions. The number of students, or the price paid for tuition not known.

"Seminaries at St. Hyacinthe, at Chambly, and at College of St. Ann, which receive legislative grants."

In several of the colleges there are professors of divinity, medicine, anatomy, philosophy, mathematics, &c., and the chairs are ably filled.

There is a Quebec literary and historical society, and a museum of natural history at Montreal; a medico-chirurgical society, an agricultural association, a mechanic's institute, &c.

THE PRESS.—This powerful adjunct of civilization, and protector of individual as well as of national liberty, is making rapid progress in Canada; where the journals are unstamped, the paper without an excisable duty, and the advertisements exempt from tax. I have no separate return of the increase of the press in each province, but in both together, the number of newspapers was, in 1827, 17; in 1828, 20; in 1829, 27; in 1830, 30; and in 1831, 37. I think I may add that the present number is about 50, namely 20 for Eastern and 30 for Western Canada. There are several daily papers; some of the journals in Eastern Canada are entirely in the French language. Both the English and French papers are conducted with ability, but, as may be expected, evince strong party feelings. They are well supplied with advertisements, and, independent of their value as political engines, are considered good commercial speculations.

CRIME.—The absence of extreme poverty, the certain reward of industry, and the extension of Christian education, are sure preventives of crime. From 1828 to 1838, the number of prisoners in the gaols of Eastern Canada, for all offences throughout the year, did not average 800 persons annually. The returns to the Board of Registration and Statistics for Eastern and Western Canada, in 1849, shows the state of crime from 1841, to 1847, inclusive. The returns are not very complete, but they show a limited amount of crime in a population of one and a half million.

Commitments.	1841	1842	1843	1844	1845	1846	1847
Offences against the Person	4	6	29	13	11	14	12
Murder	1	1	8	1	0	3	4
Manslaughter	2	0	4	3	2	2	2
Rape	2	0	2	4	3	2	2
Offences against Property	53	64	101	132	140	119	93
Larceny	40	37	65	81	92	68	52
Forgery	1	0	1	6	3	2	4
Horse stealing	4	3	11	8	12	14	12
Felony	4	9	5	11	6	4	7
Burglary	2	2	3	11	8	4	5
Unclassed Crimes	2	1	5	4	6	2	2
From Eastern Canada	59	115	30	31	52	17	38
" Western Canada	59	56	105	118	105	88	69
Grand Total	59	71	135	149	157	135	107

These returns are exclusive of military; the total commitments for seven years, ending 1st of October, 1847, were 813, of whom 57 or 7 per cent. were women. The average convictions, for crimes against the person, were 10·58 per cent; not classed, 2·62; for larceny, 54·28; for other crimes, 32·52. The total number of inquests was 1021, viz., males, 823, females, 191. The number of accidents, on which inquests were held, was 132; lunatics, 20; apoplexy, 23; drowned, 329; burned, 29; intemperance, 81; suicide, 32; exposure, 15; exhaustion, 9; found dead, 37; visitation of God, 196; murder, 22; child-murder, 5; manslaughter, 5; poisoned, 1; suffocation, 12; strangulation, 2; shot by accident, 4; sudden death, 9; by lightning, 2. The trials before the magistrates, in quarter sessions, in 1847, for petty larcenies, assaults, and trespasses were—

Districts.	Quarter Sessions.			Under Trespass Act.	
	Tried.	Convicted	Acquitted	No.	Fines.
Eastern Canada	366	244	122	265	£396
Western Canada	375	195	180	2,526	2,316
Total	741	439	302	2,791	£2,712

An excellent penitentiary has been established for the whole province.

Mr. Sheriff Thomas, of the Gore district, who has paid considerable attention to crime in Canada, in a letter of the 9th of March, 1849, says, "I am warranted in laying it down as an incontrovertible fact that crime in this portion of the globe is almost entirely engendered by dissolute habits." Drunkenness appears in all young communities to be a prevailing crime, and there is no prospect of success in our colonies for any class of immigrants, unless they abstain from the abuse of intoxicating liquors.

MILITARY DEFENCE.—There is an effective militia in Eastern and Western Canada to the number of about 260,389 men.

By the militia Act, every able-bodied male inhabitant, from 18 to 60 years of age, after six months' residence, is liable to serve in the militia, unless specially exempted by law; the exceptions embrace the clergy, civil and military officers of his majesty's government, physicians, surgeons, school-masters, stewards of religious communities, students in colleges and seminaries, notaries, land-surveyors, ferrymen, millers, &c., and persons who had served as officers of militia previous to the act. The officers are appointed by the government; the qualification for those above the rank of captain being a *bona fide* possession of an estate yielding £50 currency per annum; half the sum qualifies for a captain's or subaltern's commission. There is an annual muster by companies (29th June) throughout Eastern Canada.

The militia abstract of Eastern Canada for 1847, shows, according to the returns, 36 regiments, consisting of 173 battalions, and 137,769 men.

In Western Canada there are 34 regiments of militia, comprising 166 battalions and 122,620 men; to this force is attached 1 company of cavalry, 11 of artillery, and 1 of rifles. The whole force of Eastern and Western Canada is 260,389 men.

The commissions issued since the reorganization of the force, have been:—

Officers.	Eastern Canada.	Western Canada.	Total.
Lieut.-Colonels . . .	175	157	334
Majors	237	122	359
Captains	1,431	1,002	2,433
Lieutenants	1,590	985	2,575
Ensigns	1,346	921	2,267
Staff	439	277	716

There is an adjutant-general and a deputy-general of militia.

The regular and provincial troops in Canada in 1847, were, royal artillery, officers 35, men 574; royal engineers, 31; 1 battalion H.M. 20th, officers 22, men 601; reserved battalion, officers 15, men 527; H.M. 23rd, officers 19, men 575; H.M. 71st, officers 17, men 561; H.M. 77th, officers 23, men 569; H.M. 93rd, officers 16, men 501; 2 battalions rifle brigade, officers 14, men 305; reserved battalion, officers 6, men 268; royal Canadian rifles, officers 60, men 1,669. There was also a part of the queen's light

dragoons, and the 1st and 2nd troop of the Montreal cavalry. The principal military stations are Quebec, Montreal, St. Helens, Kingston, Toronto, Niagara, London, Isle aux Noix, and Amherstburg.

The Canadian naval force, consisted in 1847, of 1 steamer of 75 tons, on Lake Ontario, and 3 gun-boats, hauled up: on Lake Erie 1 steam vessel 406 tons; and on Lake Superior 1 steam-vessel of 210 tons, all in commission.

Canada possesses ample means within itself for defence against foreign aggression: Quebec has been long deemed impregnable, and is well supplied with military stores; Montreal and Kingston are strongly protected; Toronto is secure against surprise; the forts along the frontier are in good order; the naval and military establishment on the bay of Pentanguishene might speedily be rendered effective; the communication between Eastern and Western Canada, by the Rideau canal, exempts traffic from border annoyances; and a dense population (men with brave hearts and strong arms) along the St. Lawrence river and the great Lakes, combine, with other circumstances, to secure Canada from the danger of invasion. The Canadians have no extensive sea-board to protect; no cities on the Atlantic open to assault or pillage; no slaves within their territory ready to burst their bonds and carry slaughter and desolation throughout the land. The conqueror of Canada must first capture Quebec, and possess a navy paramount on the ocean. It has been admitted that 100,000 troops would not be sufficient for the subjugation of Eastern and Western Canada. No European nation could, therefore, make the attempt; and if the Canadians are true to themselves, and desire to continue an integral portion of the British empire, they need not fear the hostility of the adjacent republic, with whom, however, it is undoubtedly both their duty and their interest to cultivate friendly relations, which it is to be hoped the good feeling of the citizens of the United States, as well as their knowledge of the evils war ever brings with it, especially to a commercial nation, will induce them cordially to reciprocate. By the mutual exercise of a little Christian forbearance both countries may be spared the harassing anxieties and protracted feuds arising from border hostilities and internecine strife, and continue to be distinguished by the rapid progress in civilization which peace only can maintain.

CHAPTER V.

INDUSTRIAL STATE OF EASTERN AND WESTERN CANADA, PRODUCTIONS, PROGRESS OF THE PROVINCE, INTERNAL AND MARITIME COMMERCE.

THE industrial state, and progressive accumulation of property in the province, will be seen by an examination of the produce of each district. The returns for Eastern Canada for 1844 and 1848 are very imper-

fect, owing to the absence of any census in these years. In the year 1831 there was a complete return from each county; an abstract of which shows the following leading facts:—

Agricultural Produce, Cattle, Mills, &c., of each District in Eastern Canada in 1831.

Classification.	Quebec.	Montreal.	Three Rivers.	Gaspé.	Grand Total in 1831.
Area in square miles	127,949	54,802	15,823	7,389	205,963
Acres or arpents of land occupied	1,686,947	2,529,854	629,902	136,214	3,981,793
Acres or arpents of improved land	662,768	1,231,300	253,447	18,687	2,066,963
Produce raised during the year 1830:—					
Minots of wheat	911,887	2,098,982	383,544	10,342	3,404,756
Minots of peas	126,821	801,717	55,300	920	984,758
Minots of oats	798,133	1,911,861	426,770	5,520	3,142,274
Minots of barley	92,712	275,651	21,417	4,983	394,795
Minots of rye	36,744	171,962	25,441	318	234,465
Minots of Indian corn	481	313,341	25,554	256	339,633
Minots of potatoes	1,695,853	4,221,802	910,295	529,465	7,357,416
Minots of buck wheat	8,013	68,855	28,943	237	106,050
Neat cattle	104,796	229,746	48,725	5,411	388,678
Horses	26,213	76,057	13,739	677	116,686
Sheep	152,382	310,523	71,458	8,980	543,343
Hogs	74,515	174,447	39,776	6,409	295,137
Taverns or houses of public entertainment	311	640	78	6	1,035
Stores where spiritous liquors are sold	251	483	112	11	857
Grist mills	94	235	65	6	395
Saw mills	545	251	135	3	737
Oil mills	2	9	3	..	14
Fulling mills	35	47	15	..	97
Carding mills	29	40	15	..	90
Iron works	43	37	22	1	103
Trip hammers	2	14	2	..	18
Distilleries	4	56	10	..	70
Pot and pearl ash manufactories	5	462	22	..	489
Manufactories of any other sort containing any machinery . . . . .	..	58	5	..	64

The Reporter of the "Board of Registration and Statistics" in Canada, remarks that the census returns of 1831 bear evidence of having been compiled with the greatest care and attention, but the great lapse between that period and 1844, when the next census was taken, renders it very difficult to arrive at any fixed conclusion as to increase.

The produce of Eastern Canada is thus stated comparatively for 1831 and 1844—

Produce.	Census, 1831.	Census, 1844.
	Bushels.	Bushels.
Wheat	3,404,756	942,835
Peas	948,758	1,219,420
Oats	3,142,274	7,238,753
Barley	394,795	1,195,456
Rye	234,529	333,446
Indian Corn	339,633	141,008
Potatoes	7,357,416	9,918,869
Buckwheat	106,050	374,809

This shows a great falling off in the production of wheat. The produce for 1844, without any deduction of seed, would only furnish 188,567 barrels, or only one barrel for every three inhabitants.

The whole produce, in 1844, exclusive of potatoes, was 11,445,727 bushels, and allowing that two-thirds of the cultivated lands were under potatoes and fallow, it would give an average crop of 12½ bushels per acre of all grain for the remainder. In 1831, the same allowance being made, the average crop would be 12½ bushels, while Mr. Bouchette for 1827 makes it 7½ bushels, exclusive of 184,659 bushels of mixed grain. The neat cattle in 1844 were, in number, 469,851; horses 140,432; sheep 602,821; swine 197,935.

In 1844—Of the 76,440 proprietors of real estate, 15,188 held their lands in "free and common soccage," and the land so held

amounted to 1,706,993 acres, of which 540,256 were cultivated. Those held under Indian and other leases comprised 169 persons, occupying 25,598 acres, of which only 5,918 acres were under cultivation.

*Houses, Manufactories, &c., in Eastern Canada
in 1831 and 1844.*

—	1831.	1844.	In-crease.	De-crease.
Houses inhabited	82,437	108,794	26,357	—
" building	1,458	1,652	194	—
" vacant	1,542	4,115	2,573	—
No. of hives of bees	no return.	7,898	—	—
Lbs. of maple sugar	—	2,272,457	—	—
No of taverns	1,035	1,052	17	—
Stores where liquors are sold	857	1,015	—	49
Grist mills	395	422	27	—
Run of stones	not given.	844	—	—
Oatmeal mills	—	108	—	—
Barley	—	45	—	—
Saw	—	911	—	—
Oil	14	14	—	—
Fulling	97	153	56	—
Carding	90	169	79	—
Thrashing	not given	469	—	—
Paper	—	8	—	—
Iron works	103	69	—	34
Trip hammers	18	18	—	—
Nail factories	not given.	6	—	—
Distilleries	70	36	—	34
Breweries	not given.	30	—	—
Tanneries	—	335	—	—
Pot and pearlsh fac- tories	489	540	51	—
Other factories	54	86	22	—

The census of 1831 gives, of land in culture, 2,065,913 acres; and the census of 1844, 2,802,317 acres.

Taking the two last census as being authentic, we find that the increase was 35·6 per cent., while the increase in population was exactly similar, being 35 per cent. The number of landed proprietors in 1831 was 57,891, being on the average about 36 acres to each; while in 1844 the proprietors amounted to 76,440, or about 36½ acres each; this shows that the state of agriculture in Eastern Canada must have been sadly neglected, and that it is only followed far enough to give an actual sustenance to the cultivators.

The fisheries of Eastern Canada are very valuable, but have not yet been turned to much account; the whole amount of fish and oil taken does not exceed in value £100,000 a-year. Gaspé Fishery and Coal Mining Company has been incorporated in London and in Canada; and in February, 1848, capital to the amount of £58,307 had been actually paid up on account of the company, and shares to the value of £17,474 had been accepted by the Vendors of Estates in Gaspé and County of Bonaventure, of the value of £40,698, as part payment, and representing

cash. The company has invested above £30,000 in improving their estates, in building a mill, shops, and stores, in clearing land, in the erection of an extensive "Beach," or fishing establishment, in constructing vessels and boats, &c.

Timber, lumber, and ashes constitute the principal exportable produce. In the neighbourhood of Quebec £1,200,000 has been expended in lumber and saw mills. The iron works are carried on to a great extent at St. Maurice in the district of Three Rivers. Whiskey is largely distilled at Montreal; there are several soap and candle manufactories, a manufactory for cloth, and about 20,000 domestic looms in Eastern Canada. The quantity of fulled cloth produced in Eastern Canada is about 800,000 yards; of linen or cotton cloth, 1,000,000 yards; of flannel or woollen, 700,000 yards; the quantity of sheep wool annually produced, about 1,500,000 lbs. The *etoffe du pays* is a gray homespun cloth, made of mixed wool, and forms the substantial warm long coat usually worn by the *habitan* or Canadian farmer. Worsted stockings and socks, red caps, coloured sashes, mittens, lined with blanketing or hare skins, carpeting and mats, are made in every household. Excellent leather is prepared throughout the province; soap and candles are manufactured to some extent; the production of linseed oil is rapidly increasing; cordage and paper are of good quality; excellent ale and beer are brewed for domestic use, and for export to the West Indies. The cider, after being concentrated or frozen, separated from the icy or aqueous part, forms an excellent beverage.

In Western Canada the energy of the Anglo-Saxon race is markedly contrasted with the supineness of the French Canadians—who, although in possession of Eastern Canada for more than a century before Western Canada was colonized, are far behind their industrious brethren in the western division of the province—whose progress and prosperity will be best seen by an examination of the following official return:—

In less than a quarter of a century the population was augmented from 153,627 to 723,332, *i. e.* more than four-fold; the cultivated lands and houses five-fold; the uncultivated assessed land three-fold; horses and cows five-fold; oxen and other cattle four-fold; saw mills four-fold; the number of grist mills has been doubled; and the additional stones increased seven-fold.

TABULAR STATEMENT

Showing the Annual Amount and Value of all Articles Assessed for Local Taxation in Western Canada, under the several Assessment Laws of that Province, compiled from the Returns of the Clerks of the Peace, with its Population at various periods.

Years.	Population.	Lands.		Houses of all kinds, except Shanties.	Grist Mills.		Mer- chants' Shops.	Store- houses.	Horses.	Oxen.	Milch Cows.	Young Cattle.	Saw Mills.	Car- riages kept for pleasure.	Amount of Assessed Value of Property.	Gross Amount of all Local Taxes.
		Uncultivated Assessed Value, 4s. per acre.	Cultivated Assessed Value, £1 per acre.		Num- ber.	Addi- tional run of stones.										
1825	158,027	2,500,304	535,212	8,876	232	71	456	54	22,589	23,900	51,216	23,501	394	587	2,255,874	10,235
1826	163,702	2,611,725	614,254	9,732	250	80	487	57	24,995	26,580	61,954	24,806	422	582	2,403,064	9,940
1827	176,039	2,826,070	632,607	9,889	262	94	496	51	25,320	29,128	67,349	27,918	460	750	2,442,847	11,509
1828	261,060	2,977,807	678,618	10,183	274	96	548	68	27,303	30,879	67,945	29,527	515	968	2,579,083	12,533
1829	196,704	3,008,777	717,552	11,291	296	102	604	72	28,388	33,451	75,091	34,844	535	982	2,735,783	12,732
1830	210,437	3,244,410	775,014	12,082	273	121	748	91	30,777	35,770	80,909	33,396	555	986	2,929,269	13,355
1831	224,681	3,570,389	818,432	13,605	291	135	757	95	33,197	36,957	83,519	35,194	533	1,111	3,143,484	15,320
1832	261,060	3,799,014	916,173	14,550	320	152	854	96	36,601	38,941	91,676	35,250	671	1,203	3,415,822	16,503
1833	296,870	4,115,253	981,955	16,446	307	173	1,025	105	40,249	41,870	95,042	36,089	723	1,421	3,798,040	18,397
1834	320,693	4,171,995	1,034,816	16,771	328	192	957	123	41,866	42,445	99,474	36,769	788	1,409	3,918,712	19,806
1835	336,469	4,476,368	1,208,508	18,488	352	199	982	117	47,724	46,066	109,605	39,329	753	1,495	3,880,664	22,404
1836	372,502	4,807,406	1,283,133	20,951	356	227	1,043	133	54,616	48,929	120,584	44,698	802	1,720	4,605,103	23,169
1837	396,721	4,736,236	1,453,556	22,057	366	233	1,198	117	57,170	49,347	123,028	48,598	860	1,627	4,431,098	24,337
1838	385,824	4,333,890	1,206,493	19,513	359	251	917	99	52,732	38,577	109,991	42,514	774	1,467	4,282,544	24,077
1839	407,515	3,113,423	1,587,676	25,049	420	298	1,036	113	66,220	47,569	136,951	47,624	953	1,769	5,345,372	33,210
1840	427,441	5,290,014	1,710,000	25,857	420	294	1,123	130	72,734	49,317	144,900	48,625	963	1,863	5,607,426	37,465
1841	465,357	5,310,103	1,740,664	27,960	443	334	1,211	145	76,747	50,271	163,663	59,955	980	1,936	6,269,398	43,908
1842	486,955	5,548,357	1,916,319	31,638	455	359	1,299	164	83,755	55,137	173,394	76,648	982	2,188	6,913,341	58,354
1843	No census.	5,783,197	1,969,659	33,190	451	375	1,330	154	88,062	58,306	187,298	84,326	1,169	2,648	7,155,924	64,849
1844	"	5,845,935	2,166,101	35,631	465	369	1,431	155	94,168	62,306	187,298	79,050	1,246	3,042	7,556,514	74,786
1845	"	6,072,076	2,311,238	37,214	478	417	1,636	174	98,598	65,127	199,537	78,665	1,272	3,810	7,778,917	76,291
1846	"	6,182,419	2,464,704	39,625	492	426	1,868	180	105,517	68,963	218,565	74,370	1,401	4,510	8,236,677	84,137
1847	"	6,477,338	2,673,820	42,937	557	475	1,945	179	113,812	72,017	218,653	76,935	1,489	4,685	8,567,001	86,058
1848	723,292	5,858,072	2,570,938	—	996	—	1,773	179	102,697	60,887	203,927	69,869	—	—	—	—

Note.—For the year 1838 the Assessment Rolls were very imperfectly taken, owing to the disturbed state of the country.—The returns for 1848 are incomplete.

The Assessment Returns of W. Canada for the year 1848 give the following results:—

Districts.	Land in Acres.		Water Power.		Cattle.				Merchants' Shops and Store-houses at £200 each.	Valuation of Property assessed.
	Uncultivated at 4s. per acre.	Cultivated at 20s. per acre.	Grist Mills at £50 to £150 each.	Saw Mills at £100 each.	Horses 3 yrs. old and upwards at £8.	Oxen at £4.	Milch Cows at £3.	Horned Cattle, 2 to 4 yrs. at £1.		
Eastern . . .	408,469	102,462	35	56	8,608	620	15,051	3,497	124	£436,551
Johnstown . .	390,908	145,862	62	71	7,163	2,715	15,260	5,161	80	459,789
Bathurst . . .	382,735	110,288	44	50	4,027	2,695	10,168	3,212	79	329,410
Midland . . .	336,212	155,826	38	71	7,069	2,495	12,870	4,500	58	462,583
Prince Edward	117,477	102,397	41	49	4,612	1,020	7,251	1,980	49	294,451
Home . . .	596,273	376,969	223	287	16,252	6,586	28,556	8,879	245	1,105,396
Simcoe . . .	280,513	75,227	22	40	2,650	2,820	6,340	2,688	52	93,477
Niagara . . .	248,381	174,086	92	83	8,989	2,318	14,326	3,678	224	519,536
Wellington . .	498,911	166,574	68	84	4,535	7,114	12,629	6,442	109	477,613
London . . .	507,598	177,758	61	102	7,124	6,080	16,186	7,719	104	582,891
Huron . . .	345,861	64,599	18	33	1,402	4,188	5,940	3,156	48	215,969
Ottawa . . .	112,798	28,343	20	27	1,834	319	3,484	744	28	111,418
Colborne . . .	252,683	79,563	29	26	2,536	3,324	6,383	2,014	63	332,246
Newcastle . .	357,584	206,164	85	129	6,881	4,867	13,255	3,830	102	547,241
Gore . . .	363,129	298,079	107	172	10,719	6,371	18,949	6,291	256	no return
Talbot . . .	198,341	90,033	30	87	3,876	2,302	6,889	2,463	52	288,646
Western . . .	460,199	115,708	21	28	6,420	5,053	12,388	5,615	100	227,556
Total . . .	5,858,072	2,570,938	996	1,385	102,697	60,887	203,927	69,869	1,773	6,484,772

Note.—The property valued and assessed, includes houses of wood valued at £20 to £40 each, and brick houses valued at £40 to £70 each, according to the additional fire-places in each. It also includes merchants' shops and storehouses valued at £200 each, and pleasure carriages or waggons, dogs, and distilleries, &c. The rating is at the rate of one penny in the pound for common district purposes; one penny in the pound for common schools; one-eighth of a penny in the pound for lunatic asylum. In some districts there are *special* assessments for the support of the poor—for the administration of justice—for a town-hall—a bridge—a public building—or other local purposes. The returns from each district are not alike in form; I have, therefore, only given in the above tabular statement such figures as illustrate generally the wealth and social state of each district in Western Canada.

The advantages of this fine country for settlers, may be estimated by the wealth which the above table exhibits. Take for example the following return of mills, foundries, factories, &c., in the Home District, and city of Toronto, showing the estimated value of machinery, &c., connected therewith.

Grist Mills in April, 1844, 75 . . . value	£125,000
Erected since—9 mills, 25 pair stones . . .	23,000
189 Saw Mills	47,250
12 Oatmeal Mills	3,300
4 Iron Foundries, propelled by steam—city . .	14,000
5 Small ones, not steam	2,000
10 Woollen Factories, not steam	12,150
43 Carding Machines	23,700
1 Edged-tool Factory—city	1,500
3 Starch Factories—1 in city	1,550
23 Distilleries—3 in city	8,825
21 Breweries—5 in city	12,450
1 Pail Factory—city	1,000
4 Soap and Candle Factories—city	3,700
1 Cabinet and Chair Factory, by steam . . .	1,000
3 Cabinet and Piano Manufactories—city . .	1,200
1 Paper Mill—5 miles from city	1,500
31 Tanneries—2 in city	8,050
1 Snuff manufactory—city	250
1 Soda Establishment	380

£291,805

A man with health and strength, industry and honesty, may soon become independent in Canada, and realise the boast, that it is decidedly the "poor man's land."

It has been alleged that Canada has been standing still while the United States was all activity, bustle, and progress; but such is not the case: it has been well observed, that "within the last 25 years, the Rideau, Welland, and St. Lawrence Canals, some of the most magnificent and important undertakings in the world, have been commenced and completed." In the year 1799, the whole of the Home District contained only 224 inhabitants; in 1848, it had a population of 106,995. Twenty years ago, London, Hamilton, Bytown, and Cobourg, scarcely had an existence; now they are flourishing towns, with handsome houses, and spacious public buildings, and their outskirts studded with elegant villas.

The facts contained in this volume amply attest the good government of Canada, and the benefits which the province has derived from British connexion.

Lands, Products, &c.		Bathurst.	Brook.	Colborne.	Dalhousie.	Eastern.	Gore.	Home.	Huron.	Johnstown.	London.	Midland.	Newcastle.	Niagara.	Ottawa.	Prince Ed.	Simcoe.	Talbot.	Victoria.	Wellington.	Western.
Lands:—																					
Contents:—Acres		1269800	584320	647040	448000	779520	711760	1361600	1104000	1021000	999040	1108720	1344640	702360	592000	220000	1498800	384000	942000	1097000	1610710
Cultivated		110288	no return	759688	—	1024623	160154	649099	649099	143862	177158	158826	208104	174086	28543	102297	79227	600084	—	160771	113768
Uncultivated		382733	no return	252688	—	1084663	501014	592273	345861	390608	507398	336212	357584	248381	112757	117477	290513	108541	—	498911	460149
Occupied		487434	880103	3204931	2674047	523134	3688005	9202224	2679752	54997	8924675	434456	1979700	3811600	1386639	217516	355160	188830	287776	502710	468782
Tillage		53314	85706	40931	36147	81181	146931	271488	46005	93135	127725	94573	747900	106677	76109	76109	54711	70708	68284	96289	67882
Pasture		53733	130976	33020	23185	39481	82324	93326	15889	45813	50844	50781	55062	32427	10107	98412	21158	22133	16720	31938	20004
Wild		380366	252108	196846	9213040	405458	829012	492080	294531	364368	440020	289002	319255	204914	111876	11434	260883	169772	187103	400823	38522
Uncultivable		121922	13446	4291	38644	51680	55554	28890	114641	91261	16467	47621	17734	9832	15958	15633	19704	11753	10994	25572	16742
Price per Acre:—		£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Cleared		2 0 7	3 15 0	2 12 6	10 3 0	0 0	0 0	return	5 15 5	3 0 0	very	4 10 9	3 0 6	8 8 1	13 9 1	12 6 4	4 11 2	4 0 0	7 6 3	3 0 0	not given.
Wild		0 6 8	1 0 0	13 9 0	17 6 0	5 0	5 0	given.	1 5 0	much.	1 5 0	2 16 4	1 0 3	3 4 0	9 9 3	4 6 1	1 18 7	1 0 0	4 0 1	0 17 6	
Produce:—																					
Wheat		184345	394047	276044	121012	155064	987136	1451384	305725	251530	538438	197175	594673	403108	295660	209701	293071	209082	305175	549559	292998
Barley		10449	23680	6009	4131	19600	84007	110819	13143	10665	13480	21590	46375	72297	6299	18078	6985	10250	3078	27098	11294
Rye		2627	11196	1203	3814	29003	32286	25482	1073	11071	11863	113276	32042	8939	631	90318	2085	13507	16707	20871	11542
Oats		342809	372203	242820	208708	112280	1092976	15206925	174736	264808	379243	338913	515153	879243	72928	110087	212000	14757	32879	36587	104031
Peas		34380	29294	47348	27904	64274	100926	384721	36540	47319	164337	184023	98753	117632	8311	135896	35580	35550	51704	38052	51189
Maize		22393	47439	3486	10211	60134	113384	32480	7113	77986	88447	64097	121092	138133	21866	91725	5627	92366	40238	2369	83948
Buck Wheat		13005	14437	609	3651	33730	54438	10536	451	22983	30338	20393	23572	78178	1082	47362	722	49337	15333	1332	9398
Potatoes		534215	127465	191827	373433	286660	120972	423601	125492	403109	147903	347392	309937	87171	95550	184220	200876	82373	194353	254485	160749
Products, Live Stock, and Domestic Manufactures:—																					
Flax, lbs.		—	1544	249	16	6540	4121	5662	2876	681	2142	1094	1049	8607	182	738	871	1156	612	3451	no returns.
Tobacco, lbs.		—	142	20	122	138	13	13673	194223	195655	325007	196969	234493	81588	29240	114589	115960	188955	121830	292748	185453
Maple Sugar, lbs.		158693	139063	83096	32646	173847	136073	364663	314662	43730	160110	325727	134491	154085	147774	29246	99284	62571	83824	77890	41197
Wool, lbs.		106729	126701	67104	47654	129208	203576	314662	21463	34353	53922	29144	37841	26938	64895	14880	17866	16714	18878	32490	26404
Neat Cattle		22520	17579	14111	29988	46204	68262	68262	2004	9008	12319	8575	10752	11472	7175	6067	3327	4511	47780	5242	8005
Horses		4442	6577	3781	3796	11146	11610	21700	2004	9008	12319	8575	10752	11472	7175	6067	3327	4511	47780	5242	8005
Sheep		364146	49897	24228	16196	84337	68160	20303	17941	52416	99550	44281	59006	48182	9157	31404	23500	29333	26689	32015	19146
Hogs		13375	27298	16471	8870	30917	41201	70802	19424	18900	45704	17079	33620	38065	3601	8284	21617	13912	14294	25505	31472
Fulled Cloth		33755	26147	22402	16353	47171	34676	67714	9972	54903	59332	34966	44256	51408	9834	19593	15742	19772	24572	17267	14906
Linen		1936	868	724	543	8604	821	4025	1451	10479	2498	900	3690	5621	111	780	2490	1226	3487	13933	9240
Flannel		71721	86928	89574	33240	92391	192827	128034	33461	82784	130286	56479	84873	65653	13889	50636	37643	41701	39186	30372	37144
Produce for Market:—																					
Butter, lbs.		303730	107474	98372	97847	158999	271610	428297	63944	402434	551897	195318	155842	266702	44717	93059	80406	78166	70907	109685	no return
Cheese, lbs.		9573	115138	14384	9826	37572	23382	119002	6549	42909	65556	35449	77164	30293	10131	24301	7931	11957	10949	20781	return made.
Beef or Pork, barrels		7410	5928	3038	1885	2667	5639	14564	2184	3828	17995	3914	7560	3387	2237	2821	6039	1896	2519	4641	
Public Buildings:—																					
Town Halls		5	1	3	2	1	3	16	2	4	3	3	6	2	6	1	1	2	1	4	2
Churches		32	33	28	23	42	64	172	15	64	56	4	70	90	13	26	34	30	16	31	22
Colleges and High Schools		8	2	2	1	1	1	12	—	1	4	7	4	2	2	—	73	96	61	80	107
Schools		103	112	82	101	150	165	299	44	188	139	167	169	187	2	18	100	55	53	63	107
Jails		48	52	49	93	72	257	268	62	189	113	198	104	136	41	20	73	58	63	107	100
Merchants' Shops		64	56	47	73	105	186	508	39	85	83	113	139	143	22	34	39	47	45	73	42

The average yield of the several crops in the Eastern District, for example, of Western Canada, for the last ten years has been:—wheat, about 25 bushels per acre; corn, 40; oats, 40; barley, 30; peas, 35 bushels per acre.

It will be perceived that agricultural produce is the staple of the colony: various manufactories are now however arising; and the engines of many steam vessels on the lakes, have been made in Canada. About 60 large class steamers have been built and fitted out for the navigation of the lakes, and no accident by explosion has occurred. Woollens, linens, and flannels for domestic use, are made in every district; whiskey distilleries, breweries, foundries, tanneries, pot, pearl-ash, soap, and candle manufactories, are very numerous. The quantity of maple sugar made in Western Canada, in 1848, was 4,140,667 lbs., or nearly 6 lbs. for each individual. Apples, pears, plums, peaches, cherries, raspberries, currants, strawberries, gooseberries, and damsons, flourish when cultivated. On the shores of Lake Erie peaches have been sold at a quarter of a dollar per bushel, and apples are sold on the banks of the river Thames at three-pence-halfpenny per bushel. All culinary vegetables arrive at perfection. Pumpkins and squashes grow in the open fields to an enormous size; 50 to 80 pounds weight is not unusual. The fisheries of the great lakes are now being appreciated; iron and copper ore abound, and are of good quality.

But the main sources of wealth consist of millions of acres of fertile soil, a genial climate, industrious people, and a market such as England, ready to receive at all times an incalculable quantity of human food, and to furnish in return, abundance of manufactures at the cheapest rate.

The number of proprietors of real estates liable to assessment in Western Canada, in 1848, was 60,000 to 65,000; and the number of acres occupied, 8,613,591 = 133 acres to each proprietor; allowing 1,780,152 acres of land to be arable, and 766,768 pasture = 2,546,920; and considering that the great body of the people are supported by agriculture, there are more than 3 acres to each mouth.

The number of acres returned under tillage was 1,780,152; and under designated crops, as follows:—wheat, 593,695; barley, 29,324; rye, 38,542; oats, 285,571; peas, 82,516; maize, 51,997; buck-wheat, 26,653;

potatos, 56,796 acres = 1,165,004; add for omissions 10 per cent., 116,500. Grand total under designated crops, 1,281,504 acres; which leaves 498,638 unaccounted for, probably appropriated in gardens, town-plots, &c.

The unproductive lands in Western Canada comprise 571,139 acres, or about 6.63 per cent.; but a large portion returned as unfit for cultivation, are swamp lands, which only require drainage.

In England the unprofitable lands are estimated at 10 per cent. of the whole area. The value of the *uncultivated* lands, viz.: 5,849,406 acres, at £1 9s. 2d. per acre, is £8,530,383; of the cultivated, viz.: 2,546,920 acres, at £3 10s. 10d. per acre = £920,341; total, £17,550,725. Western Canada, as a British colony, offers a favourable contrast to the United States as regards agricultural produce. The Statistical Reporter for the province makes the following remarks thereon:—"In 1840 the population of the United States was 17,063,353; and in 1847, 20,746,400. In 1842 the population of Western Canada was 486,055; and in 1848, 723,332."

United States.

Crops.	Gross quantity in 1840.	Gross quantity in 1847	Quantity to each inhabitant.	
			1840.	1847.
Wheat—bushels	84,823,272	11,245,500	4.96	5.50
Barley "	4,161,504	5,649,950	.25	.28
Oats "	123,071,341	167,867,000	7.21	8.09
Rye "	18,645,567	29,222,700	1.09	1.42
Buckwheat "	7,291,703	11,673,508	0.43	.56
Maize "	377,531,875	539,350,000	22.12	26.01
Potatos "	108,295,108	100,965,000	6.35	4.86
Peas "	Not given	in either re	turns.	

Canada.

Crops.	Gross quantity in 1842.	Gross quantity in 1847.	Quantity. to each inhabitant.	
			1842	1847.
Wheat—bushels	3,221,991	7,558,773	6.62	10.45
Barley "	1,031,335	515,727	2.12	0.71
Oats "	4,788,167	7,055,730	9.85	9.75
Rye "	292,970	446,293	0.60	0.62
Buckwheat "	352,786	432,573	0.72	0.60
Maize "	691,359	1,137,555	1.42	1.57
Potatos "	8,080,397	4,751,331	16.62	6.57
Peas "	1,193,551	1,753,846	2.45	2.42

From the above table it will be seen that in proportion to the extent and population, Canada is a more agricultural and fertile country than the United States; the surplus of wheat is very great. The usual quantity allowed for the consumption of each inhabi-

tant is generally 5 bushels, which would leave for export one-half the produce of the country. The large quantity of Indian corn grown in the States, enables them, by making it a staple of consumption, to export a large stock of flour. In Canada, on the contrary, little Indian corn is grown, and wheat becomes of necessity the great article of food.

If we take the produce for 1847 at the lowest average prices, we have as the value of the products of Canada:—

Products.	Bushels.	Average prices.	Value.	
		<i>s. d.</i>	<i>£</i>	<i>s. d.</i>
Wheat . . .	7,558,773	3 6	1,322,785	5 6
Barley . . .	515,727	2 3	58,019	5 9
Oats . . .	7,055,730	1 3	440,983	2 6
Rye . . .	446,293	2 3	50,208	1 9
Maize . . .	1,137,555	2 6	142,194	7 6
Buckwheat .	432,573	4 0	86,514	12 0
Peas . . .	1,753,846	2 6	219,230	15 0
Potatos . .	4,751,331	1 6	356,329	16 6

"In making the foregoing comparison between the crops of the United States and Canada, a remark has been made which requires some observation. It is stated to be unjust to take the whole of the former country, whereas some portions do not produce wheat, Louisiana and Florida for instance, whose united population is about 600,000; we will take therefore those states which produce the greatest quantity, viz:—

United States.	Population.	Wheat.	Average to each inhabitant.
		Bushels.	Bushels.
New York . .	2,880,000	15,500,000	about 5
Pennsylvania .	2,220,000	15,200,000	" 7
Virginia . . .	1,295,000	12,250,000	" 10
Ohio . . .	1,980,000	20,000,000	" 10
Indiana . . .	1,000,000	8,500,000	" 8

"With respect to Michigan, it is worth while to examine the returns; in 1840 the population of that State, was 212,267, and its produce in wheat was 2,157,108 bushels. In 1848 the population is rated at 420,000, and the wheat crop at 10,000,000 bushels, and other crops at 22,110,000, making together 32,000,000 bushels. How does that stand with regard to the available labour of the State? According to the ratio of 1841, the whole male population between the ages of 15 and 70 would be about 127,000, of whom, allowing 75 per cent. to be engaged in agriculture we have 92,000 to collect this

enormous harvest of grain, above 350 bushels to each man. The wheat crop being about 24 bushels to each inhabitant."

Cattle increase with great rapidity in Canada, especially in the western part of the province, where the winters are not severe.

Cattle in Western Canada.

Description.	1842.	1848.	Increase.	Per Cent.
Neat Cattle .	504,963	565,845	60,882	12
Horses . . .	113,675	151,389	37,714	33
Hogs . . .	394,366	484,241	89,875	23
Sheep . . .	575,730	833,807	258,077	45

Western Canada will become a great sheep country. In 1842 the wool produced was 1,302,510 lbs.; in 1848, 2,339,756 lbs. In the United States the number of sheep in 1840 was 19,311,374 and the wool produced 35,802,114 lbs.

The quantity of lands surveyed and granted in Eastern and Western Canada, will be seen in the following tables; the subject of emigration, in connexion with the waste and unoccupied lands, will be given at the conclusion of the description of the whole of British America, to which the data furnished by official authorities apply generally.

The remarks made in 1846 by the instructive editor of the *Canadian Gazetteer* (Mr. W. H. Smith) respecting the price of land in Western Canada, deserve the notice of emigrants. "All lands in the possession of the crown, with very few exceptions, are sold at 8s. currency per acre, which may be paid for either in cash or scrip. This scrip is usually to be purchased at a discount of 20, 25, and sometimes 30 per cent. If the immigrant gets it at a reduction of 25 per cent., his land will only cost him 6s. currency per acre, which is *three pence* per acre less than the government price of land in the United States. There are about 2,300,000 acres of the crown lands in Western Canada surveyed and ready to be disposed of at this price, exclusive of the clergy reserves." Land may be purchased of private individuals in the different districts of Western Canada at the following rates:—In Victoria district, near the frontier, 4 to 10 dollars per acre for wild (uncultivated) land, and for cultivated farms, including buildings, 20 to 35 dollars per acre. In the back townships, wild land 1 to 4; cultivated, 8 to 20 dollars per acre. Other districts similar.

LANDS GRANTED AND SOLD IN EASTERN CANADA,
In the Years from 1836 to 1847 inclusive, taken from Returns furnished to the "Blue Book," by the Crown Land Commissioner.

DESCRIPTION OF GRANT.	1836.	1837.	1838.	1839.	1840.	1841.	1842.	1843.	1844.	1845.	1846.	1847.
Grants under 100 acres	No. 30 Acres 1,898	No. 379 Acres 26,566	No. 104 Acres 9,223	No. 389 Acres 35,519	No. 158 Acres 15,012	No. 60 Acres 6,112	No. 52 Acres 4,569	No. 24 Acres 2,207	No. 88 Acres 6,024	No. 138 Acres 11,192	No. 152 Acres 11,148	No. 182 Acres 13,770
Grants to 500 acres	No. 227 Acres 31,992	No. 99 Acres 20,074	No. 42 Acres 8,681	No. 96 Acres 20,680	No. 55 Acres 10,865	No. 47 Acres 11,092	No. 45 Acres 10,182	No. 31 Acres 6,160	No. 33 Acres 7,368	No. 94 Acres 16,737	No. 84 Acres 15,445	No. 83 Acres 15,359
In grants over 500 acres	No. 60,554 Acres 94,184	No. 37,518 Acres 94,108	No. 19,444 Acres 37,358	No. 75,482 Acres 131,693	No. 26,973 Acres 52,850	No. 25,537 Acres 43,331	No. 33,087 Acres 47,808	No. 23,116 Acres 31,573	No. 27,884 Acres 41,526	No. 123,588 Acres 151,573	No. 140,882 Acres 167,485	No. 13,197 Acres 42,317
Total number of acres granted	No. 94,184 Acres 155,275	No. 94,108 Acres 155,275	No. 37,358 Acres 155,275	No. 131,693 Acres 155,275	No. 52,850 Acres 155,275	No. 43,331 Acres 155,275	No. 47,808 Acres 155,275	No. 31,573 Acres 155,275	No. 41,526 Acres 155,275	No. 151,573 Acres 155,275	No. 167,485 Acres 155,275	No. 42,317 Acres 155,275
Of which were by purchase	No. 39,200 Acres 34,299	No. 68,149 Acres 34,299	No. 6,411 Acres 3,628	No. 37,251 Acres 3,628	No. 33,269 Acres 3,628	No. 8,423 Acres 3,628	No. 3,105 Acres 3,628	No. 3,290 Acres 3,628	No. 22,265 Acres 3,628	No. 50,595 Acres 3,628	No. 130,900 Acres 3,628	No. 5,369 Acres 3,628
And which were by free grants	No. 3,129 Acres 4,074	No. 3,129 Acres 4,074	No. 3,129 Acres 4,074	No. 3,129 Acres 4,074	No. 3,129 Acres 4,074	No. 3,129 Acres 4,074	No. 3,129 Acres 4,074	No. 3,129 Acres 4,074	No. 3,129 Acres 4,074	No. 3,129 Acres 4,074	No. 3,129 Acres 4,074	No. 3,129 Acres 4,074
Number of acres granted in colony	No. 3,129 Acres 4,074	No. 3,129 Acres 4,074	No. 3,129 Acres 4,074	No. 3,129 Acres 4,074	No. 3,129 Acres 4,074	No. 3,129 Acres 4,074	No. 3,129 Acres 4,074	No. 3,129 Acres 4,074	No. 3,129 Acres 4,074	No. 3,129 Acres 4,074	No. 3,129 Acres 4,074	No. 3,129 Acres 4,074
" " Ungranted*	No. 4,074 Acres 1,862	No. 4,031 Acres 1,143	No. 3,693 Acres 785	No. 3,681 Acres 219	No. 3,724 Acres 570	No. 3,724 Acres 570	No. 3,724 Acres 570	No. 3,724 Acres 570	No. 3,724 Acres 570	No. 3,724 Acres 570	No. 3,724 Acres 570	No. 3,724 Acres 570

* There were also two grants in Murray Bay, and one in Bay Chaleur—extent not known.

* Include 124,834 acres granted to the British American Land Company.

* This Line fluctuates by new surveys.

* Also 676 Town, and 76 Park Lots.

Since the 1st January 1841, there were granted in Eastern Canada :—

By purchase 527,844½ Acres.

By free grant 408,206½ " "

936,051 "

LANDS GRANTED AND SOLD IN WESTERN CANADA,

In the Years from 1836 to 1847 inclusive, taken from the Returns furnished to the "Blue Book," by the Crown Land Commissioner.

DESCRIPTION OF GRANT.	1836.	1837.	1838.	1839.	1840.	1841.	1842.	1843.	1844.	1845.	1846.	1847.
Grants under 1,110 acres	No. 1,682 Acres 134,603	No. 1,211 Acres 103,483	No. 606 Acres 52,119	No. 941 Acres 74,774	No. 1,182 Acres 92,443	No. 352 Acres 31,057	No. 419 Acres 29,001	No. 856 Acres 38,473	No. 866 Acres 34,856	No. 173 Acres 9,259	No. 1,070 Acres 69,433	No. 1,490 Acres 110,057
Grants from 1 to 500 Acres	No. 1,951 Acres 382,838	No. 699 Acres 147,006	No. 333 Acres 84,625	No. 436 Acres 87,524	No. 526 Acres 103,440	No. 224 Acres 31,436	No. 181 Acres 36,552	No. 465 Acres 34,109	No. 147 Acres 29,878	No. 872 Acres 118,876	No. 212 Acres 42,400	No. 194 Acres 39,914
In grants over 500 acres	No. 47,981 Acres 86,442	No. 1,943 Acres 279,001	No. 24,545 Acres 161,280	No. 14,219 Acres 176,518	No. 1,723 Acres 206,450	No. 585 Acres 82,905	No. 612 Acres 75,677	No. 1,084 Acres 84,952	No. 1,026 Acres 73,850	No. 1,063 Acres 168,409	No. 1,303 Acres 128,568	No. 1,103 Acres 162,371
Total number of acres granted	No. 55,275 Acres 55,275	No. 55,275 Acres 55,275	No. 55,275 Acres 55,275	No. 55,275 Acres 55,275	No. 55,275 Acres 55,275	No. 55,275 Acres 55,275	No. 55,275 Acres 55,275	No. 55,275 Acres 55,275	No. 55,275 Acres 55,275	No. 55,275 Acres 55,275	No. 55,275 Acres 55,275	No. 55,275 Acres 55,275
Of which were by purchase	No. 39,200 Acres 34,299	No. 68,149 Acres 34,299	No. 6,411 Acres 3,628	No. 37,251 Acres 3,628	No. 33,269 Acres 3,628	No. 8,423 Acres 3,628	No. 3,105 Acres 3,628	No. 3,290 Acres 3,628	No. 22,265 Acres 3,628	No. 50,595 Acres 3,628	No. 130,900 Acres 3,628	No. 5,369 Acres 3,628
Of which were by free grants	No. 3,129 Acres 4,074	No. 3,129 Acres 4,074	No. 3,129 Acres 4,074	No. 3,129 Acres 4,074	No. 3,129 Acres 4,074	No. 3,129 Acres 4,074	No. 3,129 Acres 4,074	No. 3,129 Acres 4,074	No. 3,129 Acres 4,074	No. 3,129 Acres 4,074	No. 3,129 Acres 4,074	No. 3,129 Acres 4,074
Number of acres granted in colony	No. 3,129 Acres 4,074	No. 3,129 Acres 4,074	No. 3,129 Acres 4,074	No. 3,129 Acres 4,074	No. 3,129 Acres 4,074	No. 3,129 Acres 4,074	No. 3,129 Acres 4,074	No. 3,129 Acres 4,074	No. 3,129 Acres 4,074	No. 3,129 Acres 4,074	No. 3,129 Acres 4,074	No. 3,129 Acres 4,074
" " Ungranted	No. 4,074 Acres 1,862	No. 4,031 Acres 1,143	No. 3,693 Acres 785	No. 3,681 Acres 219	No. 3,724 Acres 570	No. 3,724 Acres 570	No. 3,724 Acres 570	No. 3,724 Acres 570	No. 3,724 Acres 570	No. 3,724 Acres 570	No. 3,724 Acres 570	No. 3,724 Acres 570

The quantity of land originally surveyed in Western Canada, including that surrendered by the Indian tribes, was about 18,153,219 acres, which have been appropriated as follows:—To the United Emigrant Loyalists, and for various claims, 10,404,663 acres. Of this amount the United Emigrant Loyalists who quitted the United States during the war against England received about 3,206,987 acres; the Canadian Militia about 730,709 acres; Discharged Soldiers and Seamen, 449,400 acres; Magistrates and Barristers, 255,500 acres; Legislative Councillors and their families, 142,960 acres. The Clergy Reserves, consisting of one-seventh of the surveyed cultivable lands, set apart by George III. for the support of the Christian religion, amounted to 2,407,687

acres. There has been allotted for educational purposes to King's College, Toronto, 225,944 acres; to Upper Canada College, 63,642 acres; to Grammar Schools, 258,330 acres. The Canada Company have purchased 2,484,413 acres. The Indian Reservations not disposed of amount to 808,540 acres; the lands remaining on hand, 1,500,000 acres; and the unsurveyed lands are about 13,500,000 acres; of which it is estimated 9,000,000 acres are fit for cultivation. About half the surveyed lands of Western Canada have been purchased from the Indians since 1818, and Mr. W. H. Smith, in his valuable *Canadian Gazetteer*, gives the following statement of the quantity of land bought, and the price paid by the British Government:—

Date of Surrender.	Name of Tribe.	No. of Tribe.	No. of acres sold.	Amount of Annuity in Currency.	Conditions.
20th July, 1820	Mohawks of Quinte Bay .	415	33,280	£450 0	{ £2 10s. to each member of the tribe; but not to exceed £150. Ditto, but not to exceed £642 10s.
31st May, 1819	Mississagas of Alnwick .	218	2,748,000	642 10	
28th Oct., 1818	Ditto of Credit River .	245	648,000	522 10	
5th Nov., 1818	{Ditto of Rice and Mud Lakes}	345	1,961,000	740 0	—
17th Oct., 1818	Chippewas of Lake Huron	540	1,592,000	1,200 0	
26th April, 1825	{Ditto of Chenail, Ecarte, and St. Clair . . .}	1,129	2,200,000	1,100 0	{ If the tribe decreases one-half, the annuity is to decrease in the same proportion; the original number specified in the deed is 440 souls. £2 10s. to each member of the tribe; but not to exceed £600 yearly. £2 10s. to each member of the tribe; not to increase, but to decrease with its diminution.
9th May, 1820	Ditto of River Thames .	438	580,000	600 0	
25th Oct., 1826	Moravians of ditto . .	184	25,000	150 0	
9th Aug., 1836	Saugeen Indians . .	348	150,000	1,250 0	
	Totals,	3,862	9,927,280	6,655 0	

These purchases give the government and people of England the right of those lands in Canada, and in the event of separation or annexation to the United States, the people of England would require indemnification for their property.

£15,000 a-year is still annually voted by the British Parliament for the payment of the several sums due to the Indians, who are located in different parts of the province, and in some instances converted to Christianity; their numbers are, however, fast diminishing, and at no distant time they will probably be extinct. About 1,140 Chippewas reside on Walpole Island in Lake St. Clair. Members of the Chippewas, Munsees, Oneidas, Pottawatamies, and Moravian Delawares, are located on the banks of the river Thames, in the townships of Orford, Delaware, and Caradoc. Another Chippewa tribe are established at Sarnia, at the head of Lake St. Clair; Sir J. Colborne endeavoured to civilize this

tribe, and they have made some improvements in agriculture. The Saugeens are resident in two villages situated at the mouth of the Saugeen and at Owen Sound. The principal Indian settlement is at Manitoulin Island, where the British officers and clergymen who are appointed superintendents by her majesty's government reside. The Indians here are becoming more settled, and are being baptized.

Of the "Clergy Reserves" in Western Canada there were sold, from 1829 to 1838, 400,742 acres; and during the same period, of the Crown Lands in Western Canada only 100,317 acres were sold. In Eastern Canada there has been no sale of Clergy Reserves since 1838. Either the lands thus appropriated for the support of the different ministers of the Christian religion have been mismanaged, or the price asked for those lands have been too high.

The "Canada Company," which was incorporated by royal charter, 19th August

1826, with a capital of £1,000,000, has purchased of reserved and other lands in Western Canada 2,484,413 acres: of these, 1,300,000 acres are held in dispersed blocks, in sizes of 200 to 2,000, 10,000, 12,000, and 14,000 acres, and the remainder is comprised in the Huron tract, which was granted in lieu of one moiety of the clergy reserves scattered throughout the province. This company has effected great good, its settlements are among the most flourishing in the province, and the people therein strongly attached to the British crown. All the obligations of the company have been faithfully fulfilled; they stipulated to pay for their lands as follows:—On 1st July, 1827, £20,000; three following years, each, £15,000; in 1831, £16,000; in 1832, £17,000; in 1833, £18,000; in 1834, £19,000; in 1835, £20,000; and thereafter the sum of £20,000 annually, until 16 years shall have expired from 1st July, 1826, at which time their payments reached £295,000. From this sum the Company was authorised to deduct £45,000 for the construction of works of public utility within the Huron tract; and to this fund the Company have made large additions. Its affairs are managed by a board of directors, resident in London, and affords an illustration of the beneficial working of corporate bodies in the distant possessions of the crown.

STAPLE PRODUCTS.—Timber now forms the largest item in the exportable products of Canada; the quantity in, and adjacent to the colony is so great that it must, in all human probability, continue to yield wealth to the province for many years. In the "lumber" trade, as it is termed, a large amount of capital is employed; about one million and a half sterling is invested in the neighbourhood of Quebec in erecting saw mills, making log ponds, building craft for the transmission of deals, and forming a secure riding for vessels in the strong tide-way of the St. Lawrence, while the timber is being shipped. In different ways this business offers immediate employment to the poorest class of immigrants, and furnishes them with the means of support through the severity of a long winter, while it enables new settlers more readily to establish themselves. Until the land be cleared, its cultivation is, of course, impossible; the "lumberer" is therefore the pioneer of the agriculturist, and the trees which were an incumbrance, are, by his assistance, converted into money, and the

settler enabled to add to his means of tilling the soil.

The quantity of timber annually supplied by the Canadian forests is enormous; for instance, in 1846 there arrived at Quebec, from the interior—of white pine, 24,705,287 feet; red pine, 5,270,600; pine deals, 1,316,401 pieces; spruce deals, 916,933 pieces; oak, 2,756,754 feet; elm, 3,472,303 feet; ash, 250,432 feet; birch, 241,683 feet; Tamarac, 593,584 feet. The Western and Eastern pine, oak, elm, ash, and birch, are all square timber. In the section on New Brunswick the forest trees of British North America will be described.

The forests on the Ottawa contribute an annually increasing supply. During the three years ending 1840 there passed down the Ottawa—of white pine, 49,783 feet; red pine, 253,163; oak and elm, 7,834; deals, 46,250; and saw logs, 48,272 pieces. The country around the Saguenay also contributes an immense quantity.

In order to facilitate the transit of timber on the Ottawa, and avert the danger attendant on passing the rapids, government have constructed "slides" over several of the principal falls; those over the Chaudière have been recently visited by Mr. Barker, who says—

"They are four in number, three about 100 feet long each, and one 200 feet long; all 26 feet wide (which is the general width of all crib slides), over-covering a fall averaging generally 35 feet. In the first, or upper slide, an ingenious arrangement to regulate the pitch of water on the slides has been introduced, consisting of two large gates (as strong as oak and iron can make them) similar to lock gates, only laid flat, the upper one overlapping the under one, and forming a part of the slide. Now, the water being let in under these gates by the level above, lifts them up by hydraulic pressure; and by means of another wicket to let the water out below, the level is regulated to any required pitch, or shut off altogether by simply turning a wrench, thus showing how easily a tremendous power can be controlled—a volume of water equal to 150 feet area can be let down the slides, or shut off instantly. These slides have been in use three years, and cost upwards of £5,000. The Chute slide is the best on the river; it is 350 feet long, which, with the head gates, over-cover a fall of nearly 40 feet. This slide is built in the form of a reversed curve instead of an inclined plane; the advantages of this shape are, that the timber is prevented running out of the cribs when the timber is of unequal size. To illustrate this more fully—when cribs are passing down a slide, the largest pieces drag upon the bottom or floor of the slide, and the water floats out the smaller pieces, leaving the crib a wreck, which has generally to be pulled to pieces, and caught below and rafted over again, causing much delay and danger to the men. This slide in '46 and '47, passed about 22,000 cribs, at 5s. each, thus more than paying the first cost in two years, which was less than £5,000."

The "lumber" trade on the *Ottawa* and its branches, it is estimated, gives employment to about 10,000 men, who are fast settling that section of the country. The *Trent*, and its tributaries, with the Bay of Quinte, employ also about 10,000 men. No very accurate estimate can be made as to the numbers employed westward. In the population returns the "lumberers" are not

usually given; but the able compiler of the Canadian "Blue Books," thinks that the number engaged in this branch of industry is from 25,000 to 30,000, with a large number of cattle.

The different sections of the province where the "lumber" trade is carried on is thus shown in the official returns for 1846:—

	White Pine.		Red Pine.		Oak.		Elm.	
	Pieces.	Feet.	Pieces.	Feet.	Pieces.	Feet.	Pieces.	Feet.
Quebec and Montreal . .	22,624	1,163,081	4,264	68,592	65	1,901	691	24,449
St. Lawrence from Montreal to head of Lake Ontario	108,541	7,567,662	8,391	249,579	10,061	320,130	54,688	2,009,848
3. Grand River and Lake Erie	4,508	279,763	5	178	32,212	1,995,358	1,911	77,494
4. Ottawa and tributaries below Bytown	92,827	4,988,337	3,964	120,794	4,163	77,754	21,952	750,823
5. Gatineau	23,284	1,477,357	3,959	133,155	38	1,354	1,489	42,442
6. Rideau	26,527	1,653,851	1,778	67,460	817	21,895	8,046	264,728
7. Ottawa and tributaries below Bytown	125,780	7,532,764	118,131	4,543,549	5,184	126,272	4,487	133,801
8. United States	599	35,453	1,213	53,930	562	15,078	3,940	168,718
Total in 1846 . .	404,690	24,698,268	141,705	5,237,243	53,102	2,539,754	97,204	3,472,303
Do. in 1845 . .	404,246	19,141,982	115,432	4,444,515	38,841	1,834,485	42,847	1,567,108

Fisheries.—None organized. Many hundred barrels of white fish are annually taken, and salmon, trout, shad, pike, pickerel, herring, black and white bass, maskinonge, sturgeon, mullet, chub, and perch, are caught in great numbers. The value cannot be ascertained.

The exports of fish from Quebec, and the coasts of Gaspé, New Carlisle, and the Magdalen Islands, was for 1846,—cod, 91,124 cwt., and 274 barrels (value £56,614); haddocks, 396 tubs and 60 cwt; pickled fish, 926 barrels and 44 half barrels; salmon, 77 barrels and 154 half barrels; cod-sounds, 2 barrels and 75 kegs; fish-oil, 35,781 gallons (value £3,452); blubber, 482 gallons; seal-skins, 9,000. The value of all the above was £62,104.

Shipping.—Built and registered at Quebec, 45 ships and brigs, tonnage 33,725; and 9 schooners, tonnage 610; and at Montreal 9 vessels, tonnage 1,032. From 30 to 45 steamers, ranging from 80 to 500 tons, have been registered at the above ports. The greater number are employed as passage boats, or for towing. There are many small steamers, from 30 to 90 tons, not registered, running from Montreal to Kingston and the intervening ports; they descend by the St. Lawrence, and return by the Rideau canal.

The registered tonnage on the Lake trade, exclusive of steam-boats and iron boats, barges, &c., engaged in the forwarding trade between Kingston and Montreal, is estimated for the year 1846 at 17 or 18,000 tons. A great portion of the trade on the lower lakes (the import trade altogether), and nearly the whole on the upper lakes, is carried on in American bottoms. The steamers, propellers, and other vessels owned on Lake Ontario, and employed on the inland waters of Canada, were, in 1846, 57 steamers (2 of iron), value £350,000; 6 large propellers, value £14,000; 2 ships, 5 brigantines, and 94 schooners of 30 tons, and upwards, value £150,000; barges 300, value £80,000; 7 river-propellers, value £7,000; small craft under 30 tons, value £17,000.

Ashes—(pot and pearl)—are prepared in large quantities by the settlers when clearing their lands, to assist them meanwhile in purchasing provisions. The exports average annually 22,000 barrels of pot, and 12,000 barrels of pearl ashes. The ashes are the residue after the burning of timber or plants growing at a distance from the sea shore. The Canadian ashes contain a greater proportion of real potash, than those of Dantzic or of Russia.

Grain is rapidly becoming a valuable staple product. In 1838 there was no wheat

exported from Canada by sea; in 1847, 628,001 bushels; flour in 1838, 59,204, in 1847, 650,030 barrels; oats in 1838, none, in 1847, 163,805 barrels; oatmeal, 21,999 barrels; barley, increased from 146 to 23,612 bushels; peas, from 1,415 to 119,252 bushels; beef, from 430 to 2,000 barrels; butter, from 80,000 to 1,000,000 lbs. between 1838 and 1847. The annals of few countries record such an increase in the production of food, beyond the supply required for a rapidly increasing population. Every bushel of grain, every pound of meat that Canada can raise and rear, finds an immediate and profitable market in England, and this stimulus is causing a yearly extension of agriculture.

Many districts in Western Canada are well adapted for the growth of maize or Indian corn. The production of this article of food in the United States was in 1840, 377,531,875 bushels; in 1841, 387,380,185 bushels; in 1842, 494,618,306 bushels. It is the great staple of the agricultural produce of the States; each family of 5 persons, consumes on an average 85 bushels per annum; it is used for distillation; sugar is manufactured from the stalk, and it is kiln-dried, ground into meal, and largely exported. A farmer at Ida, in the United States, declares, that on 5 acres of land which had been cleared for 20 years, grown wheat for 18 years, and never manured, he obtained from 2 bushels of corn 972 bushels of ears, each bushel of ears weighing 37 lbs.; expense, 44 dollars; receipts, 223 dollars; net, 179 dollars.

The farmers of Western Canada are now turning their attention to the growth of maize, which, it is considered, would tend greatly to increase their supply of good pork for the markets of Europe.

Horned cattle, sheep, and swine, multiply with extraordinary rapidity, and animal food will, doubtless, ultimately form a large item in the exportable products of Canada.

Maple Sugar is made in large quantities. Eastern Canada in 1844 produced 2,272,457 lbs.; and Western Canada in 1847, 3,764,243 lbs.; total, 6,463,845 lbs. The raw material is obtained from the maple tree (*acer saccharinum*), which is tapped in spring with a gauge, by passing it obliquely upwards an inch or more in the wood; the sap flows with considerable rapidity, is boiled down, and clarified, and the sugar amounts to 5 per cent. of the whole sap. 150 trees of 10 to 15 years old, will yield,

in a fair season, 300 lbs. of sugar, 25 gallons of molasses, and a barrel of vinegar. There are extensive forests of the sugar maple tree in Canada, especially about Lake Huron, and many Indians are now engaged in the manufacture. The maple is a beautiful tree; the wood vies with black walnut and mahogany for durability and beauty; the ashes abound in alkali. The trees which come up after the first clearing, produce a more saccharine sap than the original forest maples. In the United States a very large quantity of maple sugar is prepared.

Manufactures.—There are many domestic looms, particularly in Eastern Canada (about 15,000), and several manufactories have been projected, and some established for spinning cotton. A factory on the Richelieu river, nearly opposite St. John's, produces cotton wadding 12 yards long, by 1 wide—even in its texture, double glazed, and free from lint. A mill is being constructed at Sherbrooke to drive 1,000 spindles, capable of turning out yearly 300,000 yards of cotton cloth.

The quantity of iron smelted in Eastern and Western Canada is considerable, and of excellent quality. Copper is also becoming a valuable article in the provincial products.

Shipbuilding is a profitable branch of trade. In 5 years ending 1832, the shipping built averaged annually about 5,000 tons; in one month of 1845 (February), there were building in the several dockyards at Quebec 28 vessels, whose tonnage was 19,110; and the number of artisans employed in their construction was 2,400. About 60 large class steamers have been built for the navigation of the lakes and rivers, the machinery of which was entirely constructed in Canada. The schooners plying on the lakes range from 20 to 200 tons—all built in Western Canada. The steamers range from 50 to 700 tons.

INTERNAL TRADE.—Inland commerce is very active, especially on the great lakes and adjacent canals. Its increase may be conjectured from the traffic on the Welland canal, which connects Lakes Erie and Ontario, and extends about 38 miles. In 1829 it was rendered partially available; in 1837 the tolls collected amounted to £5,516; and in 1847, to £30,549. The Cornwall Canal recently constructed, yielded in 1845 tolls amounting to £51, and in 1847, £3,336.

The revenue collected at the port of Toronto, on Lake Ontario, was, in 1841, £5,050; in 1847, £32,678. At Kingston,

on Lake Ontario, the customs yielded in 1842, £6,826; in 1847, £17,584. The gross customs collected at different inland ports in Western Canada, was in 1842, £10,723; in 1847, £40,009. At the inland ports in Eastern Canada, the increase was from £2,278 to £9,765.

The exports by land from Canada to the United States, amounted in 1832, to 3,641,385 dollars, and in 1841, to 6,656,564 dollars. The total exports from Canada to the United States by land for the ten years, ending 1841, were in value, 40,645,643; and the total imports into Canada from the United States for the same period, 18,480,234 dollars; showing a balance in favour of Canada of exports over imports, 22,165,643 dollars.

The "slides" on the Ottawa yielded tolls for timber passing in 1845, £946; in 1846, £6,054. The "slides" on the Trent in 1845, £6; in 1847, £1,162. The gross revenue from roads was in 1842, £3,821; and in 1847, £21,763. The revenue from inland harbours increased in the same period from £1,664 to £4,643; on canals generally, from £18,535 to £50,131; on bridges, from £210 to £1,094. The amount of rateable property in Upper or Western Canada in 1825, was £997,025; in 1841, £5,996,609; in 1848, about £9,000,000. All this indicates remarkable progress, especially as 1847-48 was a year of depressed trade in Canada.

Twenty-five years ago there were only two newspapers published in Western Canada, now there are an hundred in the province; then there were but eight post-offices, scattered at great distances along the frontier, and the mail was conveyed by land from Lower (Eastern) to Upper (Western) Canada, once a fortnight by land, and from Toronto, westward, once a month; now there are 280 post-offices in Western Canada, and the frequency of postal communication increases with the rapid transmission of letters. In 1834 the number of post-offices in the Canadas was 234; in 1844 the number was greatly increased. There are about 5,000 miles of post roads.

The onward progress of Canada may be illustrated by the following statement respecting the county of Huron in Western Canada. In 1828 it was an untenanted waste; in 13 years it had 6,000 settlers; of these 514 families went on their land destitute of means, and in 1841 their stock and improvements were valued at £90,486;—61 families had means under

£10 a head, and their property had increased to £10,124; 254 families had means under £50 per head, and their means augmented to £40,526; and the value of property possessed by individuals who commenced with a capital exceeding £50 per head, rose to £100,850. Thus the value of stock and improvements in the county of Huron became in 13 years, £242,286. These are not singular instances; similar cheering results of energy and industry, are to be met with in many districts of Canada.

The increase of houses in Western Canada between 1827 and 1847, was at the rate of about 10 per cent. per annum; in England from 1812 to 1831, it was not 3 per cent. Grist mills in Western Canada increased from—

1830 to 1835 . . . 79	1840 to 1845 . . . 58
1835 to 1840 . . . 68	1845 to 1847 . . . 49

The increase during the last period was, consequently, 5.13 per cent. per annum. The increase of horses from 1825 to 1847, was 9 per cent.; of oxen, 6 per cent.; of milch cows, 8 per cent.; of young cattle from 1840 to 1845, 12 per cent.; between the years 1842 and 1847, neat cattle increased 12 per cent.; horses, 33 per cent.; hogs, 23 per cent.; and sheep, 45 per cent. per annum.

The honourable Mr. F. Hincks, the receiver-general of Canada, has favoured me with the following data, which bear evidence of the improvement of the province:—

Population of Eastern Canada.	Population of Western Canada.
1825 . . . 423,630	1824 . . . 151,097
1827 . . . 471,876	1832 . . . 261,060
1831 . . . 511,920	1834 . . . 320,693
1844 . . . 690,782	1836 . . . 372,502
1848 estimate 776,000	1842 . . . 486,055
	1848 . . . 723,292

80 per cent. of the whole population derive their subsistence directly from agriculture.

Acres of Cultivated Land in Western Canada.	Houses of all kinds.
1825 . . . 535,212	1825 . . . 8,876
1830 . . . 775,014	1830 . . . 12,082
1835 . . . 1,208,508	1835 . . . 18,488
1840 . . . 1,710,000	1840 . . . 26,857
1845 . . . 2,311,238	1845 . . . 37,214
1848 . . . 2,673,820	1848 . . . 42,937

Grist Mills.	Saw Mills.
1825 71	1825 394
1830 273	1830 555
1835 352	1835 753
1840 420	1840 963
1845 478	1845 1,272
1847 492	1847 1,489
1848 527	

<i>Carriages kept for pleasure</i>		<i>Merchants' Shops.</i>	
1825	587	1825	456
1830	986	1830	748
1835	1,495	1835	982
1840	1,863	1840	1,123
1845	3,800	1845	1,626
1847	4,685	1848	1,945

<i>Value of Assessed Property</i>		<i>Local direct Taxes.</i>	
1825	£2,256,874	1825	£10,235
1830	2,929,269	1830	13,335
1835	3,880,994	1835	22,464
1840	5,607,426	1840	37,465
1845	7,778,917	1845	76,291
1847	8,567,001	1848	86,058

Public Buildings in Western Canada.

Town Halls	68
Churches	895
Colleges and High Schools	39
Common Schools	2,464

Produce.

Bushels of Wheat	{ 1842	3,221,991
	{ 1848	7,558,773
" Oats	{ 1842	4,788,167
	{ 1848	7,055,730
" Rye	{ 1842	292,970
	{ 1848	446,293
" Peas	{ 1842	1,193,551
	{ 1848	1,753,846
" Maize	{ 1842	691,359
	{ 1848	1,137,555
" Barley	{ 1842	1,031,355
	{ 1848	515,727
" Potatoes	{ 1842	8,080,397
	{ 1848	4,751,331
Wool	{ 1842 lbs.	1,302,510
	{ 1848	2,339,756
Neat Cattle	{ 1842 Head.	504,963
	{ 1848	565,845
Horses	{ 1842	113,657
	{ 1848	151,389

Sheep	1842	Head.	575,730
	1848		833,807
Hogs	1842		394,366
	1848		448,241

No comparative Returns of the following:—

	1848.	lbs.
Flax		41,590
Butter		3,380,406
Cheese		668,357

Owing to causes which I need not explain, the last census was not taken for Eastern Canada. The statistics given, therefore, are for Western Canada alone.

MARITIME COMMERCE.—Quebec and Montreal are the seaports of Canada. In 1800 the arrivals at Quebec consisted of 64 vessels, with a burthen of 14,293 tons; in 1842, 864 vessels, of 307,687 tons; and in 1845, 1,475 vessels, of 559,712 tons.

In the appendix to the minutes of evidence before the select committee of the House of Lords in 1848, the *declared* value of British and Irish produce exported from the United Kingdom to Canada, is stated for 1845 at £2,212,339, and the *official* value of the same at £4,511,699. The shipping which entered the ports of the United Kingdom from Canada during the same year was, 1,580 vessels, of 629,824 tons.

The value of the import and export trade has increased in nearly the same ratio as the shipping. The subjoined tables show the amount of the sea commerce for the 8 years following the re-union of Eastern and Western Canada in 1840:—

Value of Imports at the Ports of Quebec and Montreal since the re-union of the Provinces.

Years.	Great Britain.	British Colonies.			United States.	Other Foreign States.	Total.
		West Indies.	North America.	Elsewhere.			
QUEBEC:	£	£	£	£	£	£	£
1841 . . .	74,457	775	57,922	—	282,610	17,343	179,109
1842 . . .	75,701	1,016	28,745	—	16,275	56,363	178,084
1843 . . .	234,449	1,039	42,390	72	27,997	24,647	330,597
1844 . . .	396,196	994	48,310	123	59,646	33,798	539,070
1845 . . .	486,047	5,321	26,982	64	52,970	16,145	585,533
1846 . . .	496,099	—	38,361	1,481	52,448	28,854	617,245
1847 . . .	473,417	624	42,078	813	109,082	28,985	655,000
1848 . . .	381,625	1,585	54,056	3,020	50,803	23,302	514,393
1849 . . .	—	—	—	—	—	—	—
MONTREAL:							
1841 . . .	1,632,480	—	38,615	—	10,763	17,078	1,699,837
1842 . . .	1,614,981	1,072	32,686	—	558	12,570	1,661,868
1843 . . .	911,828	1,255	54,576	—	58,509	33,751	1,059,921
1844 . . .	1,803,226	367	55,378	—	143,219	30,922	2,034,315
1845 . . .	1,990,864	8,329	33,876	—	190,114	20,446	2,153,631
1846 . . .	1,734,760	31	37,111	—	90,513	31,205	1,893,623
1847 . . .	1,491,877	270	49,487	—	126,557	27,785	1,695,978
1848 . . .	1,062,948	—	29,522	—	107,873	17,138	1,217,604
1849 . . .	—	—	—	—	—	—	—

144 ARTICLES OF EXPORT AND IMPORT AT QUEBEC AND MONTREAL.

Value of Exports from Quebec and Montreal.

Years.	Great Britain.	British Colonies.			United States.	Other Foreign States.	Total.
		West Indies.	North America.	Elsewhere.			
QUEBEC:	£	£	£	£	£	£	£
1841	1,102,542	31,337	78,946	191,952	417	14,853	1,420,049
1842	592,107	24,187	56,578	127,593	—	14,446	814,922
1843	1,068,288	11,133	33,706	—	—	10,968	1,124,097
1844	1,178,326	3,381	34,899	1,025	467	3,968	1,222,067
1845	1,649,702	1,450	33,728	—	750	4,871	1,690,562
1846	1,478,573	989	54,394	—	—	116	1,534,074
1847	1,413,599	—	88,551	1,859	921	329	1,505,259
1848	1,034,121	—	79,456	—	1,618	415	1,115,619
1849	—	—	—	—	—	—	—
MONTREAL:	£	£	£	£	£	£	£
1841	526,064	11,782	35,543	2,028	—	—	575,400
1842	565,681	5,137	28,137	—	—	—	598,955
1843	285,876	5,720	27,470	—	—	—	319,067
1844	597,276	3,444	16,766	—	—	450	617,916
1845	571,096	—	21,339	—	—	—	592,436
1846	506,697	—	18,784	—	5,293	—	541,100
1847	616,563	—	32,878	—	22,587	400	697,794
1848	283,104	—	27,474	—	11,124	358	322,061
1849	—	—	—	—	—	—	—

The variety of articles exported from the United Kingdom to the British North American Colonies is shown in a return laid before parliament, 22nd August, 1848, which states the declared value of some of the principal exports to British North America to be as follows, in the year 1847:—Cotton manufactures, £606,614; woollen manufactures, £586,151; iron and steel, £342,166; apparel, slops, and haberdashery, £356,006; linen manufactures, £147,670; hardware and cutlery, £166,994; cordage, £102,807; silk manufactures, £117,425; leather, saddlery, and harness, £73,754; brass and copper manufactures, £32,515; earthenware, £52,869; hats, £35,984; soap and candles, £46,671; stationery, £54,157; glass, £33,890; tin wares, £19,809; umbrellas and parasols, £8,372; apothecary wares, £16,377; musical instruments, 5,129; painters' colours, £24,403; plate, watches, &c., £17,020; books, £19,013; cabinet wares, £7,548; fishing tackle of all sorts, £39,496; lead and shot, £9,126; and various other articles—the whole amounting to £3,231,480 declared value, which is far less than the real value.

The principal articles imported into the United Kingdom from the British North American Colonies in 1847, consisted of timber not sawn or split, 590,557 loads; deals, battens, or other timber sawn or split, 494,084 loads; staves, 32,308; ashes

(pearl and pot), 99,713 cwts.; wheat, 87,199; quarters; wheat and flour, 1,079,940 cwts.; beef salted, 1,272 cwts.; pork do. 8,004 cwts.; fish, 83,486 cwts.; oil (train and spermace), 10,324 tuns; skins and furs undressed, viz., bear, 5,870; beaver, 23,132; fox, 27,102; lynx, 32,299; marten, 150,048; mink, 42,850; musquash, 260,982; otter, 8,021; seal, 443,438; wolf, 10,730. The following statement shews the—

Exports from Canada by Sea (exclusive of Timber), for the years 1838 to 1847 inclusive.

Years.	Ashes.	Butter.	Beef.	Barley.	Flour.
	barrels.	lbs.	barrels.	bushels.	barrels.
1838	29,454	80,536	439	146	59,204
1839	25,480	72,248	2,310	191	48,427
1840	24,498	403,730	3,685	60	315,612
1841	22,012	211,497	2,968	4,504	356,210
1842	27,641	542,511	9,608	867	294,799
1843	34,916	374,207	7,195	6,940	209,957
1844	35,743	460,800	5,568	63,755	415,167
1845	30,916	812,475	2,140	27,626	442,228
1846	26,011	786,701	2,826	6,287	555,602
1847	19,243	1,036,555	1,890	23,012	651,030

Years.	Oatmeal.	Peas.	Pork.	Wheat.	Oats.
	barrels.	bushels.	barrels.	bushels.	bushels.
1838	522	1,415	8,868	None.	None.
1839	50	2,855	6,479	3,336	—
1840	6,008	59,378	11,230	142,059	—
1841	4,567	123,574	14,795	562,862	—
1842	6,764	78,985	40,288	204,107	5,666
1843	5,327	88,318	10,684	144,233	3,651
1844	6,725	130,355	11,164	282,183	24,574
1845	1,570	220,912	3,493	396,252	53,530
1846	5,930	215,339	5,508	534,747	46,060
1847	21,999	119,252	4,674	628,001	165,805

CHAPTER VI.

REVENUE, EXPENDITURE, AND FINANCIAL STATE OF CANADA; BANKS, COINS, CIRCULATING MEDIUM; PRICES OF PROVISIONS, WAGES OF LABOUR, WEIGHTS AND MEASURES; PROPERTY, MOVABLE AND IMMOVABLE; SUMMARY ADVICE ON "SEPARATION" OR "ANNEXATION," &c.

REVENUE.—At the period of the British conquest of Canada the public income was very trifling; in 1806, it amounted to £29,116, and the expenditure was £35,134. The revenue of Eastern and Western Canada stood thus in the undermentioned years:—

Years.	Revenue Receipts.			Expenditure.		
	Eastern Canada.	Western Canada.	Total.	Eastern Canada.	Western Canada.	Total.
	£	£	£	£	£	£
1824	83,309	61,566	144,875	83,763	43,553	127,316
1839	147,254	167,627	304,881	165,991	196,310	362,330
1842	United	.	349,183	—	—	476,304
1847	"	.	506,826	—	—	458,021
1849	Estimated	.	574,640	—	—	565,403

The annual revenue of the province is derived from *Custom* duties, about £450,000, of which one-third is yielded by the inland ports on the lakes, and United States frontier; the remainder consists of sea Customs. The *Excise* yields £30,000 a year, which is obtained from the licensing of shops, inns, stills, ale and beer houses, auctioneers, steam-boats, hawkers and pedlars, and billiard-tables, and from a duty on auction sales. The *Tolls* from public works are estimated for 1849, at £50,000; in 1847 the gross receipts were £83,333; viz.: from canals, £50,131; harbours, £4,643; bridges, £1,094; locks and slides on the Ottawa and Trent rivers, £5,702; roads, £21,763. The territorial revenue is from £20,000 to £25,000 a year; of this sum the crown lands yielded in 1847, £22,330.

Tariff or Custom Duties.—Under the authority of an act of the Imperial Parliament, passed in the 9th and 10th years of her majesty's reign, c. 94, entitled, "an act to enable the legislatures of certain British possessions to repeal or reduce certain Custom duties," the Canadian legislature passed an act, No. one, 10 and 11 Vic., c. 31, on 28th July, 1847, repealing certain imperial acts, 9 and 10 Vic., c. 94, and 8 and 9 Vic., c. 93, and various provincial acts, and imposing the following duties in lieu of all other duties of Customs inwards:—

Animals:—	Duty	Currency.
	£	s. d.
Cows and Heifers, each	.	1 2 6
Calves, each	.	0 5 0
Goats, each	.	0 2 6
Horses, Mares, Geldings, Colts, Fillies,		
Foals, each	.	1 15 0
Kids, each	.	0 2 6
Lambs, each	.	0 1 0
Oxen, Bulls, Steers, each	.	1 15 0
Pigs (sucking), each	.	0 0 6
Swine and Hogs, each	.	0 5 0
Sheep, each	.	0 2 0
Candles.—Wax or Spermaceti, the lb.	.	0 0 3
Tallow, the lb.	.	0 0 1
All other kinds	.	0 0 2
Chocolate, the lb.	.	0 0 2
Cocoa, the lb.	.	0 0 0 ½
Coffee, Green, the lb.	.	0 0 1 ½
Roasted, the lb.	.	0 0 2 ½
Ground, the lb.	.	0 0 4
Corn Brooms, the dozen	.	0 1 3
Fish, Salted or Dried, per 112 lbs.	.	0 2 6
Pickled, the barrel	.	0 5 0
Flour, the barrel of 196 lbs.	.	0 3 0
Fruit, viz.:—Almonds, the lb.	.	0 0 1 ½
Apples, the bushel	.	0 0 6
Ditto, dried, the bushel	.	0 1 0
Currants and Figs, the lb.	.	0 0 1
Nuts of all kinds, the lb.	.	0 0 1
Peaches, Pears, and Quinces, the bushel	.	0 1 0
Prunes, the lb.	.	0 0 1 ½
Raisins—Muscatel, Bloom, and Bunch, in boxes, the lb.	.	0 0 1
Ditto, otherwise, the lb.	.	0 0 1
Glass.—Window and Common German Sheet Glass, per box of 50 feet	.	0 1 3
Grain, viz.:—Wheat, Barley, Buckwheat, Bere, Bigg, Rye, Beans, and Peas, the quarter	.	0 3 0
Maize or Indian Corn, the quarter of 480 lbs.	.	0 3 0
Oats, the quarter	.	0 2 0
Meal of the above Grains, and of Wheat not bolted, the 196 lbs.	.	0 2 0
Bran or Shorts, the 112 lbs.	.	0 0 3
Hops, the lb.	.	0 0 3
Honey, the lb.	.	0 0 1
India Rubber Boots and Shoes, the pair	.	0 0 7 ½
Leather, viz.:—Goat Skins, tanned, tawed, or in any way dressed, the dozen	.	0 5 0
Lamb or Sheep Skins, tanned, tawed, or in any way dressed, the dozen	.	0 2 6
Calf Skins, tanned, tawed, or in any way dressed, the lb.	.	0 0 4
Kip Skins, the lb.	.	0 0 2
Harness and Upper Leathers, the lb.	.	0 0 1 ½
Sole Leather, the lb.	.	0 0 2
Leather cut into shapes, the lb.	.	0 0 4
Patent or Glazed Leather, the lb.	.	0 0 4
All Leather not above described	.	0 0 1 ½

	Duty Currency.			Duty Currency.	
	£	s. d.		£	s. d.
Leather Manufactures, viz.:			Sugar.—In which are preserves, per cwt.	1	6 6
Women's Boots and Shoes, the dozen	0	6 6	Succades, including Confectionary, 20 per cent. ad valorem, and on the lb.	0	0 2
Girls' Boots and Shoes under 7 inches in length, the dozen, including all kinds	0	2 6	Syrups, except Spirits, the gallon	0	1 0
Children's Boots and Shoes over 3 inches in length, the dozen	0	2 6	Tea, the lb.	0	0 2½
Infant's Shoes under 3 inches in length, the dozen	0	1 6	Tobacco, viz.: —Unmanufactured, the lb.	0	0 1½
Men's Boots, the pair	0	2 0	Manufactured, the lb.	0	0 2
Men's Shoes, the pair	0	0 7½	Snuff, the lb.	0	0 6
Boy's Boots under 8 inches in length, the pair	0	1 0	Cigars, the lb.	0	3 0
Boys' Shoes under 8 inches in length, the pair	0	0 4	Wine —(in addition to 10 per cent. on the value, including cask and bottles)—		
Liquids, not Spirituous, viz.:			the old Wine gallon	0	1 0
Ale and Beer in Casks, per gallon	0	0 4	Wood —Staves, Standard or Measurement, per mille	1	5 0
Ditto in Bottles, per dozen	0	1 3	Puncheon or West India, viz.:		
Cider and Perry, the gallon	0	0 1½	White Oak, per standard mille	0	10 6
Vinegar, the gallon	0	0 3	Red Oak	0	7 6
Maccaroni and Vermicelli, the lb.	0	0 1½	Ash and Barrel	0	4 0
Molasses and Treacle, the cwt.	0	4 0	Deals, Pine, per Quebec standard 100	0	15 0
Oils. —Olive in casks, the gallon	0	0 5	Spruce	0	7 6
Ditto in jars or bottles, the gallon	0	1 3	Handspikes, per dozen	0	0 3
Lard, the gallon	0	0 5	Oars, per pair	0	0 3
Linseed Oil, the gallon	0	0 2½	Planks, Boards, and all kinds of Sawed Lumber not herein charged with duty, per 1000 superficial feet, inch thick, and so in proportion for any greater thickness	0	7 6
Sperm Oil, the gallon	0	0 6	Pine, White, and in proportion for any smaller quantity thereof, per 1000 cubic feet	1	5 0
Other Oils from creatures living in the sea	0	0 1	Red, per 1000 cubic feet	1	15 0
Paper, &c. —Coarse or Wrapping, the cwt.	0	2 9	Oak, per 1000 cubic feet	2	15 0
Printing, the cwt.	0	5 0	Birch, per 1000 cubic feet	2	10 0
Writing, the cwt.	0	10 0	Ash, Elm, Tamarack or Hacmatac, and other woods not herein charged with duty, per 1000 cubic feet	1	5 0
Drawing, Music, Marbled or Glazed, Tissue, Bristol or Drawing Cards, the lb.	0	0 1½			
Pasteboard and Cards, the cwt.	0	4 0			
Milled or Trunkmakers' Boards, the cwt.	0	3 0			
Playing Cards, the pack	0	0 3			
Potatoes, the bushel	0	0 3			
Provisions, viz.: —Butter, the cwt.	0	7 6			
Cheese, the cwt.	0	5 0			
Meats. —Bacon and Hams, ditto salted, ditto pickled, the cwt.	0	6 0			
Bacon and Hams, fresh, the cwt.	0	4 0			
Rum, for every gallon (of old wine measure) proof by Sykes' Hydrometer, all Spirits above that strength to be reduced to equivalent of proof	0	1 3			
Sweetened or Mixed, per gallon	0	3 0			
Salt, from Mines, known as Rock Salt, and Salt made from Sea Water, per ton	0	1 6			
Coarse, made from Salt Springs, per bushel	0	0 2			
Fine or Basket and stoved 5 per cent. ad valorem and per bushel.	0	0 2			
Spices, viz.: —Cassia, Cinnamon, and Cloves, the lb.	0	0 2½			
Nutmegs, the lb.	0	0 5			
Pimento, Pepper, Ginger, and Allspice, the lb.	0	0 1			
Mace, the lb.	0	0 4			
Spirits, except Rum, as of Proof, the old Wine gallon	0	2 0			
Sweetened or Mixed, including Bitters, per gallon	0	3 0			
Sugar. —Refined or Candy, per cwt.	1	7 6			
Muscovado, per cwt.	0	15 3			
Clayed Sugar (10 per cent. ad valorem) and per cwt.	0	15 3			
Bastard, per cwt. (and £10 for every £100 value)	0	12 0			

The following Articles shall be liable to a duty of One pound on every One hundred pounds of the value thereof:—

Ashes; Anchors and chain cables; Bark; Burr stones, unwrought; Berries, nuts, vegetables, and woods, used in dyeing; coals, coke, and cinders; Cotton wool and cotton yarn; Copper in bars, pig, sheathing, and sheet; Cocoa nut oil; Drugs used solely for dyeing; Flower roots; Fire wood; Grease and Scraps; Hides; Hardwood for furniture, unmanufactured; Hay; Hemp, flax, and tow, undressed; Indigo; Iron, bar, rod, and nail, boiler plates, pig, railroad bars, scraps, and old for re-melting; Junk or oakum; Lard; Lead in pig; Marble in block, unpolished; Oars of all metals; Palm oil; Resin; Saw logs; Straw; Sheet and hoop iron; steel in bar; Stone for building; Soda ash; Tallow; Teasles; Tin, sheet and block; Trees, shrubs, bulbs, and Roots; Type metal, in blocks or pigs; Tar and pitch; Wool; Woollen yarn; Yellow metal.

The following Articles shall be liable to a duty of Five pounds on every One hundred pounds of the value thereof:—

Books, printed, unbound, or in sheets; Drugs, being in a crude or unprepared state, except dye stuffs; Furs, skins and peltries, dressed or undressed; Gums; Rice; Shingles; Tortoise shell; Wire, iron.

The following Articles shall be liable to a duty of Seven pounds ten shillings on every One hundred pounds of the value thereof:—

Books, blank, bound, unbound, or in sheets; Burr

stones, wrought; Chicory; Chains; Cotton, manufactures of; Cordage; Canvass; Camblets and cambletines; Cane work; Casks, empty; Casts in plaster of Paris or composition, unless their material is otherwise charged with a higher duty; Drawings, engravings, maps, globes; Extracts and essences used as medicines; Earthen and stoneware; Furs and skins, manufactures of; Fins and skins, the produce of creatures living in the sea; Feathers; Flowers, artificial, not silk; Goods, whose foundation is wool; Glass manufactures, not otherwise described; Gunpowder; Guns and fire-arms; Gold and silver leaf; Hair, manufactures of; Horns, horn tips and pieces; Hardware, shelf goods, and cutlery; Hats; Hemp, flax or tow in any way dressed; Juice of limes; Lemons or oranges, not mixed with spirits or sweetened, so as to be syrup; Ink, printers'; Ivory, bone, and horn, manufactures of; Lead, manufactures of; Lead for paint, not ground with oil; Lead ground in oil for paint; Linen and linen manufactures; Mules and asses; Mustard; Medicines; Musical Instruments of wood; Mercury; Marble, polished or cut; Oil or spirits of turpentine; Oil, castor; Oil, all not otherwise enumerated; Oil cloth; Oysters, lobsters, turtles, and all other shell fish, fresh; Paints, unground; Paints, water colours; Paint brushes; Quills; Silk, raw; Silks, manufactures of, not millinery made up; Silk, all goods being in whole or part silk, not otherwise specified; Silks, sewing, cord, and tassels; Spemaceti, except candles; Sponge; Starch; Straw boards for bookbinders; Sulphur; Tiles and roofing; Toys; Turpentine; Thread, linen; Vetches; Varnish; Whalebone; Worsted, manufactures of; Woollen, manufactures of; Wax; Wax, manufactures of, except candles; Wood, all manufactured articles of, having no part metal; and all goods, wares, and merchandizes, not otherwise charged with duty, and not herein declared to be free of duty.

The following Articles shall be liable to a duty of Ten pounds on every One hundred pounds of the value thereof:—

Biscuits and crackers; Bastard sugar, together with 12s. per cwt., and clayed sugar, with 16s. 3d. per cwt.; Cork and cork manufactures; Eggs; Fruit, unenumerated; Leather manufactures not described; Machines for agricultural purposes, except threshing machines and fanning mills; Meats prepared otherwise than by salt or pickle; Musical instruments of metal; Oil, animal, except lard—vegetable, not otherwise enumerated—essential, chemical and volatile, perfumed; Paper manufactures not otherwise charged with duty; Plate and plated ware; Poultry, alive, or dead; Sausages and puddings; Seeds, garden, flower, and vegetable; Soaps of all kinds; Vegetables, fresh; Wine, in addition to 1s. a gallon, old wine measure.

The following Articles shall be liable to a duty of Twelve pounds and ten shillings for every One hundred pounds of the value thereof:—

Axes and scythes; Billiard and bagatelle balls of wood and ivory; Balls used at bowls or nine pins; Billiard tables; Bagatelle tables; Camphine oil; Carriages and vehicles; Carriages and vehicles, parts of; Castings; Clocks and watches; Clocks and watches, parts of; Dice; Flowers, artificial, in part or whole silk; Fanning or bark mills; Jewellery, set or unset; Machinery of all kinds and parts thereof; Silk millinery made up; Silk velvet; Threshing machines and fanning and bark mills.

The following Articles shall be liable to a duty of Fifteen pounds on every One hundred pounds of the value thereof:—

Extracts, essences, and perfumery, not otherwise provided for; Fish, preserved in oil; Fruit, preserved; Ginger, preserved; Pickles and sauces.

The following Articles shall be liable to a duty of Twenty pounds on every One hundred pounds of the value thereof:—

Roulette tables; Succades and Confectionary made of sugar, either in whole or in part, in addition to 2d. per lb.

TABLE OF EXEMPTIONS.—Anatomical Preparations when imported expressly for the use of any college or school of anatomy or surgery, incorporated by royal charter or act of Parliament, not imported for sale.

Copies of the Holy Scriptures printed in the United Kingdom of Great Britain and Ireland, and not imported for sale.

Books and Maps and Illustrative Drawings, imported for the use of any library to which the public may have free admission, as also for the libraries of either branch of the legislature.

Coin and Bullion.

Donations of Books or Clothing specially imported for the use of, or to be distributed gratuitously by any charitable society in this province.

Fish, fresh, not described.

Horses and Carriages of Travellers, and horses, cattle, and carriages and other vehicles, when employed in carrying merchandize, together with the necessary harness and tackle, so long as the same are *bona fide* in use for that purpose, except the horses, cattle, carriages, and vehicles, and harness, of persons hawking goods, wares, and merchandizes through the province for the purpose of retail, and the horses, carriages, and harness of any circus or equestrian troop for exhibition. The horses, carriages, caravans, and harness of any menagerie, to be free. Horses and cattle belonging to persons coming into the province for the purpose of actually settling therein.

Hides, Offal, and Tallow of cattle and swine, slaughtered in bond.

Manures of all kinds.

Models of Machinery, and of other inventions and improvements in the arts.

Packages containing dutiable articles.

Philosophical Apparatus, instruments, books, maps, stationery, busts, and casts of marble, bronze, alabaster or plaster of Paris, paintings, drawings, engravings, etchings, specimens of sculptures, cabinets of coins, medals, gems, and all other collections of antiquities, provided the same be specially imported in good faith for the use of any society incorporated or established for philosophical or literary pursuits, or for the encouragement of fine arts, or for the use or by the order of any university, college, academy, school, or seminary of learning within this province.

Philosophical Apparatus, &c., &c., imported for use by any public lecturer for the purpose of gain, and to be re-exported, shall be allowed to be entered under bond of two good and sufficient persons for their exportation within the specified time.

Arms or Clothing which any contractor or contractors, commissary or commissaries, shall import or bring into the province for the use of her majesty's army and navy, or for the use of the Indian Na-

tions in this province: Provided the duty otherwise payable would be defrayed or borne by the Treasury of the United Kingdom or of this province.

Specimens of Natural History, Mineralogy, or Botany. Seeds of all kinds, farming utensils and implements of husbandry, and animals for the improvement of stock when specially imported in good faith by any society incorporated or established for the encouragement of agriculture.

Wearing Apparel in actual use, and other personal effects not merchandize, implements and tools of trade of handy-craftsmen, in the occupation or employment of persons coming into the province for the purpose of actually settling therein.

[The native produce and manufactures of all or any such of the other British North American colonies as shall admit the native produce and manufactures of Canada free of duty, shall be entitled to exemption from duties under this act, with the exception of spirituous liquors.]

Also Salt, salted or cured meats, flour, biscuits, molasses, cordage, pitch, tar, turpentine, leather, leather-ware, fishermen's clothing, and hosiery, fishing craft, utensils and instruments imported into the district of Gaspé from the United Kingdom or the Channel Islands or neighbouring colonies, for the use of the fisheries carried on therein, subject to such regulations as the principal officer of Customs at the port of Quebec shall make, and which he is hereby empowered to establish for the purpose of ascertaining that such articles are *bona fide* intended to be applied to the use of such fisheries.

The following articles are prohibited to be imported, under a penalty of Fifty pounds, together with the forfeiture of the Parcel or Package of Goods in which the same shall be found:—

Books and Drawings of an immoral or indecent character. Coin, base or counterfeit.

In this tariff Canada levies higher duties on British manufactures than has been hitherto authorised by the Imperial Parliament;—viz.: 7½ per cent.—the previous tariff was at the rate of 5 per cent. There is at present no distinction made between British and foreign goods; it is in fact a free import tariff, except in so far as is necessary for the obtaining of a provincial revenue. England receives no favour whatever on the export of her goods to Canada; the Canadians are at liberty to “buy in the cheapest, and sell in the dearest market;” and the alteration in the navigation laws enables them to employ the shipping of any country, which can carry their goods with the greatest economy. It cannot be said that the “mother country” has sought any advantage from its government of this province of the empire.

The gross amount of revenue from customs at the principal stations in Eastern and Western Canada, was in—

Revenue.	1842.	1843.	1844.	1845.	1846.	1847.	1848.
Districts:—	£	£	£	£	£	£	£
Quebec	72,923	55,843	77,879	74,425	78,652	70,831	63,325
Montreal	152,403	102,482	223,690	227,765	179,596	171,285	140,499
St. John's	17,759	22,350	36,016	41,165	40,422	45,411	22,341
Hamilton	7,604	12,191	16,989	22,011	20,726	26,768	30,326
Toronto	8,390	17,603	25,105	22,195	33,529	32,678	27,752
Kingston	6,826	9,278	18,527	19,924	19,273	17,584	10,937
Eastern Canada Inland Ports . .	2,278	3,771	8,368	10,857	11,512	9,765	38,849
Western Canada	10,723	18,052	34,754	36,614	38,602	40,309	
Total	278,906	141,570	441,328	434,956	422,312	414,631	334,029
Provincial Excise Duties received .	33,991	30,741	33,846	30,082	18,702	33,056	29,614
Territorial Revenues	51,775	97,862	6,570	25,783	23,906	26,284	51,959
Gross Revenue from Canals . . .	18,535	25,751	38,347	28,957	39,340	50,131	46,493
“ Harbours	1,664	4,450	3,822	4,360	4,340	4,643	3,663
“ Bridges	210	563	229	1,432	1,334	1,094	1,590
“ Locks and Slides	—	618	1,560	2,478	9,300	5,702	4,368
“ Roads	3,821	3,250	300	3,816	7,170	21,763	22,499
Total Gross Revenue from Public Works	24,232	34,604	44,259	41,039	61,486	83,335	78,613
Ordinary Expenses of Management .	1,282	2,320	3,524	6,339	10,614	9,470	—
Repairs and other Expenditure . .	6,580	6,207	19,292	7,198	2,391	31,307	51,519
Total Deductions	7,862	8,527	22,816	13,538	13,006	40,778	—
Nett Revenue from Public Works .	16,369	26,076	21,443	27,501	48,480	42,557	—

The revenue raised for local purposes in Western Canada is shown in the annexed statement, which exhibits the value of assessed property in Western Canada, as rated under provision of an act of parliament, including duties on shops, distilleries,

billiard-tables, hawkers, pedlars, steam-boats, ale and beer houses, and the taxes for *general local purposes*, and exclusive of the taxes and values in the various cities and incorporated towns, except the general Excise

Districts in Western Canada.	Assessed Value of Property.	Taxes.		Total.
		Pro- vincial.	District.	
	£	£	£	£
Bathurst . . .	329,410	142	2,607	2,749
Brook . . .	357,156	333	4,320	4,654
Colborne . . .	386,794	242	2,558	2,601
Dalhousie . . .	397,080	384	2,370	2,754
Eastern . . .	436,550	827	3,243	4,071
Gore . . .	846,066	3,031	8,740	11,772
Home . . .	1,105,396	2,803	10,957	13,761
Huron . . .	148,754	261	1,188	1,449
Johnstown . . .	459,789	1,220	4,909	6,160
London . . .	582,981	1,076	8,620	9,696
Midland . . .	462,583	2,226	4,031	6,258
Newcastle . . .	265,271	2,335	5,100	7,435
Niagara . . .	519,536	922	5,909	6,831
Ottawa . . .	111,418	120	1,208	1,328
Prince Edward . . .	316,703	127	2,345	2,473
Simcoe . . .	224,485	233	3,135	3,368
Talbot . . .	288,646	753	2,692	3,446
Victoria . . .	285,171	240	2,135	2,375
Wellington . . .	477,613	1,515	7,066	8,582
Western . . .	434,235	587	4,849	5,436
Total . . .				

The tax for schools and school-houses, in 1848, amounted to £29,668; ditto building and supporting lunatic asylums, £4,348. Great portions of the taxes for district purposes are raised for temporary objects, such as repairs of particular works, building gaols and lock-up houses, while the school-rate includes a very large sum for building school-houses. The general average of taxation in Western Canada for purely district purposes, is about 3*d.* on the valuation in the districts; in cities and towns it is differently regulated.

In all new countries the value of the labour in erecting houses is much greater than that of the materials used. In Canada, the dwellings of the earlier settlers are generally termed "shanties." Such dwellings are not liable to any taxes.

The houses taxed in Western Canada since 1827 have been—

—	1827.	1832.	1837.	1842.	1847
No. of Houses	9,889	14,560	22,057	21,638	42,737
Additional fire-places . . .	1,592	2,080	2,591	6,823	9,218
Value asses ^d . £	352,304	514,667	751,883	1,235,189	1,679,496

The assessments, it is stated, are very much below the *actual* value of the property assessed. They merely indicate the value according to the rate prescribed by the provincial act regulating assessments in Upper Canada. By that act, the *highest* value at which a house is rated is £60, or if containing more than two fire-places, £10 more for every additional fire-place. Houses, therefore, that have cost from £300 to £3,000 are, in these returns, rated as of the

value of £60. So also mills and other valuable buildings. Cultivated land is valued at £1 per acre, though its actual value may, on the average, be estimated at £5 per acre. Uncultivated lands are valued at 4*d.* per acre, though the government sell none for less than twice that price. It would not be unsafe, therefore, to multiply the amount of the assessed value by 5, to arrive at an approximation to the *actual* value of the property in Upper Canada. Thus, £7,139,901 × 5 = £35,699,555. These calculations take no account also of a large amount of local public property, yielding a considerable annual revenue, such as turn-pike roads, market buildings, &c., belonging to local corporate bodies, and to the several districts.

The local taxes or district rates are collected from each individual, at the rating of one penny in the pound, according to the quantity of land and other property he may possess, agreeably to the assessed value fixed by law, viz.:—

Every acre of arable, pasture, or meadow land, £1; every acre of uncultivated land, 4*s.*; every town lot, £50. Every house built with timber squared or hewed on two sides, of one story, with not more than two fire-places, £20; ditto for every additional fire-place, £4. Every house built of squared or flatted timber on two sides, of two stories, with not more than two fire-places, £30; ditto for every additional fire-place, £8. Every framed house under two stories in height, with not more than two fire-places, £35; ditto for every additional fire-place, £5. Every brick or stone house of one story, and not more than two fire-places, £40; every additional fire-place, £10. Every framed brick or stone house of two stories, and not more than two fire-places, £60; ditto for every additional fire-place, £10. Every grist mill, wrought by water, with one pair of stones, £150; ditto with every additional pair, £50. Every saw-mill, £100. Every merchant's shop, £200. Every store-house, £200. Every stone house, £199. Every horse of the age of three years and upwards, £8. Oxen of the age of four years and upwards, £4. Milch cows, £3. Horned cattle, from two to four years and upwards, £4. Every close carriage with four wheels, kept for pleasure, £100. Every open carriage, or curricule, ditto, £25. Every other carriage, or gig, with two wheels, ditto, £20. Every waggon kept for pleasure, £15. Every stove erected and used in a room

where there is no fire-place, is considered as a fire-place.

Every person inserted on the assessment roll is, in proportion to the estimate of his property, held liable to work on the highways or roads in every year, as follows:—If his property be rated at £25, 2 days; ditto £25 to £50, 3 days; ditto £50 to £75, 4 days; ditto, £75 to £100, 5 days; ditto £100 to £150, 6 days; ditto £150 to £200, 7 days; ditto £200 to £250, 8 days; ditto, £250 to £300, 9 days; ditto £300 to £350, 10 days; ditto £350 to £400, 11 days; ditto £400 to £500, 12 days.

For every £100 above £500 to £1000, one day; for every £200 above £1000 to £2000, ditto; for every £300 above £2000 to £3000, ditto; for every £500 above £3500, ditto.

Every person possessed of a waggon, cart, or team of horses, oxen, or beasts of burthen or draught used to draw the same, to work on the highways 3 days. Every male inhabitant, from 21 to 50, not rated on the assessment roll, is compelled to work on the highways 3 days. Persons emigrating to this province, intending to become settlers, and not having been resident 6 months, are exempt; and all indigent persons, by reason of sickness, age, or numerous family, are exempt at the discretion of the magistrates.

Any person liable may compound, if he thinks fit, by paying 5s. per day for each cart, &c., and 2s. 6d. for each day's duty; to be paid within 10 days after demand made by an authorised surveyor, or the magistrates can issue their distress for double the amount and costs.

By subsequent resolutions for raising £500,000 for making roads, the Canadians resolved:—

- 1st. That for the purpose of providing the ways and means for payment of the interest on the sum of £500,000, to be expended on the public highways in this province, that the statute labour, now by law required to be performed, be commuted for a certain sum to be paid in lieu thereof.
- 2nd. That the sum at which the commutation be fixed be 2s. 6d. for each day.
- 3rd. That the following additional rates be imposed on the inhabitants of this province, the proceeds whereof to be applied to the payment of the interest of the said sum of £500,000:—Every horse (not being a stallion used for covering mares), gelding, or mare, over three years old, 1s. 3d.; stallion used for covering mares, 2s.; single-horse pleasure waggon, 2s. 6d.; two-horse pleasure waggon, 5s.; two-wheeled carriage used for pleasure, 5s.; four-wheeled open carriage used for pleasure, 10s.; four-wheeled close carriage used for pleasure, 15s.; four-wheeled carriage used for the conveyance of passengers, £2 10s.: a still, £5.

EXPENDITURE.—At the period of the reunion of the provinces in 1840–41, a permanent civil list was agreed to, and became a part of the act of union; viz.: 3 and 4 Vic., c. 35, to which the following schedules were annexed:—

SCHEDULE A.	
Governor	£7,000
Lieutenant-Governor	1,000
<i>Western Canada—</i>	
1 Chief Justice	1,500
4 Puisne Judges, at 900l. each	3,600
1 Vice Chancellor	1,125
<i>Eastern Canada—</i>	
1 Chief Justice, Quebec	1,500
3 Puisne Judges, Quebec, at 900l. each	2,700
1 Chief Justice, Montreal	1,100
3 Puisne Judges, Montreal, at 900l. each	2,700
1 Resident Judge at Three Rivers	900
1 Judge of the Inferior District of St. Francis	500
1 Judge of the Inferior District of Gaspé	500
Pensions to the Judges, Salaries of the Attorneys and Solicitors-General, and Contingent and Miscellaneous Expenses of Administration of Justice throughout the Province of Canada,	20,875
	£45,000

SCHEDULE B.	
Civil Secretaries and their Offices	8,000
Provincial Secretaries and their Offices	3,000
Receiver-General and his Office	3,000
Inspector-General and his Office	2,000
Executive Council	3,000
Board of Works	2,000
Emigrant Agent	700
Pensions	5,000
Contingent Expenses of Public Offices	3,300
Gross Total	£75,000

In 1847 the payments under schedule A, were: union act, £37,818; provincial act, £8,561 = £46,379; under schedule B, union act, £20,589; provincial act, £9,997 = £30,586. Total, £76,967.

The total military cost of the Canadas in the year 1847, for payment of troops and commissariat expenses was, *Regulars*, officers, 222; non-commissioned officers and men, 5,474; payment, £196,609. *Royal Artillery*, officers, 36; men, 627; payment, £24,721. *Royal Engineers*, officers, 26; no men; payment, £10,918. Commissariat expense of the whole, £37,433. The total payment, commissariat expenses of the Canadas for 5 years, ending 31st of March, 1847, was £1,726,213; of which sum £212,715 was commissariat. The British expenditure for the flotilla of the Royal navy employed on the lakes, was in 1847, £8,724; of which £4,904 consisted of wages to officers and seamen.

The estimates voted annually in the Imperial Parliament for Canada, consist of two items; the first is £11,578 for the clergy in North America. For this amount the faith of the British government is pledged to several religious bodies, viz.: to the clergy of the Church of England annually, £7,711; to the presbyterians in connexion with the Church of Scotland, £1,582; ditto, in connexion with that of Canada, £700; to the British Wesleyans, £700; and to the Roman catholic bishop and priests of that church, £1,500. Second, between £14,000 and £15,000 a year are voted annually for the North American Indians, in payment of their lands, as stated at page 138.

The expenditure of the whole province for 1848, was:—

Interest on Provincial Debt . . .	£166,014
Ditto on Turnpike Trusts . . .	3,172
Civil Government of Eastern and Western Canada . . .	33,804
Administration of Justice . . .	68,082
Provincial Penitentiary . . .	15,000
Legislature . . .	29,231
Education . . .	64,870
Agricultural Societies . . .	9,376
Hospitals and other Charities . . .	12,709
Public Works, exclusive of works out of guaranteed loan . . .	12,167
Militia . . .	1,847
Light-house maintenance . . .	4,828
Emigration and Quarantine . . .	752
Pensions . . .	10,846
Miscellaneous . . .	22,222
Indian Annuities . . .	6,655
Redemption of Public Debt . . .	15,000
Total . . .	£474,491

The expenditure of £29,231 for the legislature includes, salaries and contingencies, £20,921; printing the laws, £3,127; returning officers, £4,733. The sum of £10,846 for pensions, includes militia, £3,779; legislative, £544; judges, £2,058; schedule B (union act), £4,193. The miscellaneous £20,222 includes, rent and repairs, &c. to public buildings, £10,150; rent of bishop's palace, Quebec, £1,111; assessment on property at Quebec and Montreal, £1740; expense of the provincial penitentiary commission, £1,500, and other items.

The militia pensions include, 26 militia-men of Eastern Canada, at £13 10s. per annum, £351, disabled during the war; 96 militia-men of Western Canada, at £18, £1,728, disbanded during the rebellion; 11 widows of militia-men killed during the late war, £18 each, £198 = 90 widows and children of militia-men who died on service during the late rebellion, £18 each = £1,620.

The civil pensioners of the province in 1846 were in number, 60, and of varying sums from £900 down to £18 a year. The total civil and military pensions for 1846, amounted to £11,461.

FINANCIAL STATE OF CANADA.—It has been stated in the history of the province (see pages 35–36), that previous to the re-union of Western with Eastern Canada, the Upper or Western portion, had contracted a large public debt, in the making of canals, &c. In June, 1841, the total outstanding debt of Western Canada was stated to be £213,671 in currency, and £869,650 in sterling; the debt of Eastern Canada at the same period was £113,975 currency; total currency, £327,646, and sterling, £869,650, together in sterling, £1,335,720. Of these sums the debt in sterling, (£869,650) paid 6 per cent. interest in England; of the currency debt, £5,500 paid 8 per cent interest; £282,206, paid 6 per cent.; £73,940, paid 5 per cent.; and the remainder from 5½ to 5¾ per cent. per annum. At the period of the re-union of the provinces, in 1840–41, the British government guaranteed a loan for Canada of £1,500,000, to be employed in public works. Other loans have since been contracted, and the liabilities of Canada on the 31st of January, 1849, stood as follows in sterling money:—

	£	s.	d.
Imperial Guaranteed Loan . . .	1,500,000	0	0
Debentures, principal and interest, payable in London . . .	1,018,375	7	7
Ditto, payable in Canada . . .	530,729	10	10
Ditto, in small Debentures . . .	71,749	6	4
Unfunded Debt . . .	102,985	3	11
Balance at credit of the Consolidated Revenue Fund . . .	170,855	19	9
Redemption of Debt . . .	291,041	10	10
Special Funds managed by the Province . . .	418,021	8	3
Debentures issued by way of loan on security of specific taxes or mortgage . . .	133,315	10	4
Sinking Fund . . .	44,000	0	0
Total . . .	£4,281,074	6	10

Of this total of £4,281,074 sterling, £3,703,781 have been expended on various public works, which now yield a net revenue of £60,000 to £80,000 a year, and is annually increasing. The debentures, £133,315, have been loaned on ample security to the commissioners for erecting the Toronto Lunatic Society; to the Law Society at Toronto; and to the sufferers by the Quebec fire,—secured by mortgages on real property. The following is a detailed statement of the cost of these public works,

which are unequalled for their magnitude and utility, by those of any other possession of the British crown.

	£	s.	d.
St. Lawrence Canals	1,442,314	1	8
Welland Canal	1,391,022	8	8
Chambly Canal			
Improvement of River Richelieu	86,409	7	10
Lake St. Peter	74,500	0	0
Burlington Bay Canal	48,376	13	7
Ottawa Works	81,979	19	6
Harbours and Lighthouses	266,504	17	10
Improvement of the Trent	135,445	2	10
Roads and Bridges, Western Canada	530,384	4	4
Ditto Eastern Canada	268,326	11	1
Provincial Penitentiary	34,207	15	1
Miscellaneous Works	31,507	11	2
Losses by Public Works and otherwise	112,288	14	7

Halifax Currency £4,506,267 9 0

Sterling at 24s. 4d. £3,703,781 9 4

Explanatory Remarks.

* These Canals are the Lachine, Beauharnois, Cornwall, and three smaller ones. "The works have been constructed" says Mr. Hincks, "in the most substantial manner, and they are unequalled on the American continent."

* The Chambly Canal connects the St. Lawrence and Richelieu with Lake Champlain. Business is increasing rapidly through it.

* This money has been expended in making a new channel through Lake St. Peter. There has been great difference of opinion as to the propriety of deepening the old channel or forming a new one, and the works are at present suspended.

* The slides on the Ottawa have been of immense advantage to the lumber trade, and yield a fair return for the capital invested.

* Tolls are charged on all the Government Harbours sufficient to meet the interest of the expenditure. Such works are of the utmost importance, affording, as they do, facilities for the export of the produce of the country. They are principally on the shores of Lakes Erie and Ontario.

* The improvements on the Trent are principally slides to facilitate the operations of the lumberers in the county of Peterboro'.

* These are macadamised or plank roads on which tolls are exacted, and toll bridges. They have been of the greatest advantage to the people; and though at first tolls were strongly objected to, the people now pay them most cheerfully, and are anxious for the continuation of such works.

* This amount is very far short of the actual cost of the Penitentiary, the remainder having been defrayed out of the current revenue.

* This account is charged with various kinds of losses, and is in fact analogous to the profit and loss account of a merchant. It includes the amount lost by the failure of a house in London some years ago, (Thomas Wilson and Co., for £66,040) and losses by exchange and otherwise.

Up to the 1st of July, 1844, there has been expended on the improvements of the St. Lawrence, £325,576; including Beauharnois Canal, £162,281; Lachine Canal, £45,410; Cornwall Canal, to June, 1843, £57,110; Lake St. Peter, £32,893.

Lockage and Canals on the St. Lawrence.

	No. of locks.	Canal Miles.
The Galloppes	2	2
Point Iroquois	1	2½
Rapide Plat	2	4
Farren's Point	1	0½
Cornwall Canal	7	11½
Beauharnois	9	11½
	22	32½

The assets of the province consist of the public works which may fairly be valued at £4,000,000 sterling. The entire revenue from those works, after deducting £20,000 currency per annum, is permanently appropriated as a sinking fund, for the redemption of the debt incurred in their construction. £44,000 is also invested by the Bank of England in 3 per cent. consols, on account of the provincial sinking fund. Out of £170,855 balance at the credit of the consolidated revenue fund, Mr. Hincks states, "it is probable that £100,000 will be transferred to the account, *Redemption of the Debt*, this will make the amount at the credit of that account, about £391,000, to which must be added the sinking fund of £44,000 (in the 3 per cent. consols) showing a saving out of the annual revenue of £435,000 sterling, or upwards of half a million currency, since the union of the provinces." Canada, in fact, has done more than England, for it has provided a sinking fund for the ultimate redemption of its debt; and it has assets to show, and even to sell or mortgage, which would liquidate the debts incurred. Taking the whole debt of Canada at £4,500,000 currency, and the annual revenue at £600,000 currency, the debt of Canada does not exceed *seven and a half years* of its income. Taking the national debt of the United Kingdom of Great Britain and Ireland at £800,000,000, and the annual revenue at £60,000,000, the debt is equal to *thirteen and a half years* of the public income. Again, taking the debt of Canada at £4,500,000 currency, and the population at 1,500,000, the proportion of public debt due by each individual is *fifty-one shillings*; taking the debt of Great Britain and Ireland at £800,000,000, and the population at 28,000,000, the proportion of public debt due by each individual in the United Kingdom, is *five hundred and seventy-one shillings*. And it must be remarked, that while Canada has provided a sinking fund, which at compound interest would in a given period pay off her whole debt, England has no sinking fund, has no assets to

represent its debt, and has provided no means for the ultimate liquidation of her debt.

The population of Canada is increasing with wonderful rapidity; property is augmenting in value faster than population, for the waste lands of the province are every day being converted from useless areas, into productive fields; and blessed with internal peace, and protected against foreign aggression by its being a part of a great empire interested in its preservation, and zealous for its integrity and honour, Canada may look forward to the fulfilment of all its obligations, and to a high career of prosperity.

The debt and liabilities of Canada are thus stated in the "Blue Book" for 1846:—

In England—bearing interest at 5 per cent. by debentures, exclusive of the guaranteed loan, £1,068,375.

In Canada—viz.: in Upper Canada debentures, and debentures of Canada, £328,772.

By "Upper Canada" debentures, are understood those issued *before* the union of the provinces, in 1840–41, under acts of the Upper Canadian legislature. "Canada debentures" are those issued *since* the union, under acts of the united legislature.

Provincial Debentures of Lower Canada, vested in Trustees for Works (the interest

only being guaranteed by the province, and all paying except the first two):—Chambly Canal, £35,000; Turnpike Trusts, Quebec, £38,850 = £68,850 at 6 per cent., £4,130; Longueil and Chambly Trust, £15,000; Montreal Harbour, £90,925; Turnpike Trusts, Montreal, £47,000 = £221,775 interest paid by commissioners.

Redemption of Public Debt—Being balance to meet rise or fall in exchange, £5,275.

New English Loan.—£1,363,000 sterling, interest at 4 per cent., £60,458 16s. 10½d.

The debt in England is all at 5 per cent. per annum; of the £328,772 due by Canada debentures, £144,910 bears interest at 5 per cent.; £175,112 at 6 per cent.; £5,000 at 5½ per cent.; and the remainder at rates varying from 2 to 6 per cent. according to the age of the debt.

Periods of redemption of the English loan (1,068,375): in 1854, £200,000 redeemable; in 1855, £400,000; in 1857, £224,150; in 1858, £45,500; in 1863, £77,725; in 1866, £121,000 = £1,068,375.

The Canadian loan of £328,772 is redeemable at different periods, from the year 1847 to 1874, in which last year £42,580 is payable.

BANKING INSTITUTIONS.—The sound state of the monetary institutions of the province will be seen from the following returns:—

Banking Returns, 31st January, 1849, compiled from the Returns laid before the Provincial Parliament.

Liabilities, Assets, &c.	Banque du Peuple.	Bank of Montreal.	Commercial Bank.	Bank of Upper Canada.	Quebec Bank.	City Bank.	Gore Bank.	Bank of B. N. America Cana- dian Branches.	Totals.
	£	£	£	£	£	£	£	£.	£
Liabilities:—									
Promissory Notes in circula- tion not bearing interest	32,144	249,286	157,049	149,610	44,911	116,001	66,353	185,834	1,001,188
Bills and Notes in circulation bearing interest	—	—	—	—	—	—	—	—	—
Balance due to other Banks	12,255	30,451	12,129	34,357	—	3,914	—	16,203	109,309
Cash Deposits not bearing in- terest	21,386	154,734	45,392	76,949	35,653	19,943	12,991	161,978	712,068
Cash Deposits bearing interest	23,372	67,880	27,663	11,068	16,800	18,092	18,167		
Total average of Liabilities	89,157	502,351	242,233	271,974	97,364	167,950	97,511	364,015	1,822,565
Assets:—									
Coin and Bullion	10,339	155,049	52,396	27,355	15,904	20,614	13,538	84,294	379,489
Landed and other Property of the Bank	13,126	45,455	23,206	31,935	6,500	12,341	5,025	—	137,588
Government Securities	—	10,200	—	—	12,000	95,760	—	—	117,950
Promissory Notes or Bills of other Banks	3,447	20,581	11,019	13,082	658	13,857	7,945	20,857	91,446
Balances due from Banks and foreign agents	1,486	31,732	34,496	15,952	4,296	10,357	21,955	19,041	139,315
Notes and Bills discounted, or other debts due to the Bank not above included	263,022	1,096,996	556,573	564,459	166,417	304,186	169,093	854,917	3,977,663
Total average of Assets	291,420	1,360,033	679,690	652,783	205,775	457,305	217,546	979,109	4,843,451

Note.—The return under the head "Notes and Bills discounted," for the Gore Bank includes a claim of £40,000 on the estate of Reid, Irving, and Co., of London.—City Bank Bills of Exchange, £3,863.

The circulation per month of the Canadian banks, is about £1,300,000 to £1,500,000. The average circulation of the Bank of Montreal, is £500,000; City bank of Montreal, £230,000; Commercial bank, Midland District, £200,000; Bank of Upper Canada £200,000; Gore bank, £100,000; Quebec bank, £80,000; Banque du peuple, £85,000; Bank of British North America, branches, £250,000. All the banks issue notes as low as 5s. There is no provincial metallic currency; the amount of British coin in circulation cannot be ascertained; it is small in proportion to the entire circulating medium; the Canadians, like the Scotch, prefer their own bank notes to metal.

There are several Savings' Banks in Canada.

The Montreal Savings' Bank owes to depositors	£84,366
Montreal City and District do. do.	44,560
The Quebec Provident and do. do.	31,772
The Hamilton and Gore do. do.	5,745
Total	£166,443

The *British America Fire and Life Assurance Company* has a subscribed capital stock of £100,000, of which £35,000 has been paid on 7,989 shares. The amount of property insured against fire during the year ending 31st of January, 1849, was £800,305. The premium received, £6,737; amount of losses paid during same period, £3,243; losses under adjudgment, 1,363; present liability under 1,170 policies, £727,489; insured against dangers of navigation, £173,466; premium received for the year, £3,326; losses paid, £2,258; losses under adjudgment, £1,000. The *St. Lawrence Inland Marine Assurance Company*, has a subscribed capital of £100,000, of which £15,000 is paid up. Property insured during 1848, £433,407; premium on ditto, £5,996; losses paid during the year, £3,009; losses under adjudgment, £900.

MONIES.—Accounts are kept in Halifax currency, by which a guinea (weighing 5 dwts. and 6 grs.) is equal to 24s. 4d. currency; a sovereign to 23s. 3d.; a Joannes (a gold coin, weighing 18 dwts.) to £4; a moidore (weighing 6 dwts. and 18 grs.) to £2; and an eagle (weighing 11 dwts. and 6 grs.) to 50s. The gold, Spanish, and French coins are—a doubloon (17 dwts.) £3 14s. 6d.; Louis-d'or, coined before 1793, (5 dwts. 4 grs.) £1 2s. 8d.; the pistole, ditto, (4 dwts. 4 grs.) 18s. 3d.; the forty-franc piece, coined since 1792, (8 dwts. 6 grs.) £1 16s. 2d.; the twenty-franc piece (4 dwts.

3 grs.) 18s. 4d. In silver coins the crown is equal to 5s. 6d.; Spanish and American dollar to 5s.; English shilling, 1s. 1d.; pistareen, 10d.; French crown, coined before 1793, 5s. 6d.; French piece of six francs, 5s. 6d.; five-franc piece, 4s. 8d.; American dollar, 5s.; and so on. The coins in most general circulation are dollars of various denominations.

Accounts kept in £ s. d. To change Halifax currency (4 dollars = £1 currency) into British sterling, deduct one-tenth. To change British sterling into Halifax currency, add one-ninth.

WEIGHTS AND MEASURES.—English weights: viz., pound, troy, and avoirdupois. The standard wine gallon is the liquid measure of the province; the Canada minot for all grain, &c., except where specially agreed on to the contrary; the minot is an eighth larger than the Winchester bushel. The Paris foot for all measures of land granted previous to the conquest; the English for all since that era. The arpent is for all other measures English, unless it may be otherwise agreed on. For rough calculations, 100 acres superficial are equal to 100 arpents.

The acts 4 and 5 Vic. c. 88 and 89, passed for the inspection of flour and meal, and beef and pork, make the following provisions, viz:—

Meat.—Barrel of Pork (contents not less than 30, nor more than 31 gallons wine measure) to contain 200 lbs. of meat.

Tierce of ditto (45 to 46 gallons) 300 lbs.

Barrel of Beef (28 or 29 gallons) 200 lbs.

Tierce of ditto (44 or 45 gallons) 300 lbs.

And the barrels and tierces in proportion.

Flour.—A barrel, 196 lbs. net weight; Indian meal, 168; and oatmeal, 200 ditto.

Grain, Pulse, &c., purchased by weight, as follows:—wheat, per bushel, 60; Indian corn and rye, 56; barley, 48; oats, 34; pease, 60; beans, 50; clover and Timothy seeds 60; and grass seeds, 48 lbs.

AVERAGE PRICES OF VARIOUS PRODUCE.—It is very difficult to give this correctly; the best result attainable is but an approximation, because prices depend materially on the English and New York quotations, and vary with every mail. The different seasons have an effect upon the markets, and also the means of transport to markets, as traffic is chiefly confined to the cities and towns. During winter a considerable rise takes place, in consequence of the consumption of the "lumber" men. In 1845, hay sold as high as from 27 to 30, and even 35 dollars a ton; oats, barley, and Indian corn proportionally.

In Montreal and Toronto provisions are

sold at a dear rate, but in the rural districts articles of food are comparatively cheap.

The following are the average prices in sterling money, for Western Canada, returned to her majesty's government for 1845:—

Wheat flour, per barrel of 196 lbs., 20s. to 25s.; wheat, per 60 lbs. bushel, 3s. 6d. to 5s.; oats, 1s. to 1s. 2d.; rye, 2s. to 2s. 9d.; and barley, 1s. 8d. to 3s. 3d. per bushel; wheaten bread, loaf, of 4 lbs., 6d. to 7d.; potatoes, 1s. to 2s. per bushel; horned cattle, £5 to £15; horses £10 to £30; sheep, 10s. to 17s. 6d.; swine, 16s. to 25s.; turkeys, 2s. to 3s. 6d.; and geese, 1s. 3d. to 1s. 9d. each; ducks, 1s. 4d. to 2s. 3d.; fowls, 1s. to 1s. 9d. per couple; eggs, 5d. to 10d. per dozen; milk, 2½d. per quart; butter, 6d. to 9d.; cheese (Canadian), 4½d. to 6d.; beef, 3d.; mutton, 2½d.; pork, 3½d.; coffee, 1s.; tea, 2s. 6d. to 5s., and sugar 4½d. to 7d. per lb.; salt, 10s. per 280 lbs.; wine (plain), 5s. to 16s.; brandy, 4s. 6d. to 4s. 9d.; and beer, 10d. to 1s. per gallon; tobacco, 7½d. to 1s. 2d. per lb.; hay, £35 to £40 per ton. All these are highest in winter, and are according to the city of Toronto market lists.

Wages for Labour.—Domestic, 15s. to 25s.; predial or agricultural (with board), 27s. to 50s., (without board), 50s. to 70s. per month; trades, 3s. 9d. to 6s. per day. The difference of prices and wages of labour in Quebec and Montreal with those of Toronto are small.

The timber trade is a large staple of Canada, and the following list of prices at Quebec may be useful:—

	£	s.	d.	£	s.	d.
White pine, in the raft, according to quality and sizes, measured off	0	0	6 to	0	0	6½
Do., in shipping order, do.	0	0	6½	0	0	7
Red pine, in the raft, 32 to 37 feet average	0	0	8½	0	0	9½
Do., new do., 37 to 45 do.	0	0	9½	0	0	10½
Do., 40 feet average in shipping order	0	0	10	0	0	10½
Oak, Lake, in the raft	0	1	4	0	1	5
„ Rideau, do.	0	0	11	0	1	3
„ Inferior	0	0	7	0	0	11
Elm, according to average, in shipping order	0	0	8	0	0	10½
Ash	0	0	5½	0	0	7
Birch	0	0	9	0	1	0½
Tamarack and Hackmatac	0	0	4	0	0	6½
Staves, standard, per mille	40	0	0			
„ W. O. Pun.	12	10	0	13	0	0
„ Red oak, do.	7	10	0	8	0	0
„ Barrel	4	0	0	5	0	0
„ Ash	6	10	0	7	0	0
Pine deals, in the raft, floated, first	9	10	0	10	0	0
Do., do., seconds	5	10	0	6	10	0
Do., do., thirds	3	10	0	3	15	0
Do., Bright, 2-3rds for 2nds	10	0	0	11	0	0
Spruce deals, firsts	7	10	0			
Do., seconds	5	10	0	5	15	0
Do., thirds	3	15	0			
Handspikes, in the raft	0	4	9	0	6	0
Do., in small parcels	0	10	0			
Oars, according to specification, per pair	0	3	0	0	11	0

Note.—Parties in Britain will bear in mind, that when timber is sold in the raft, the charges for ship-

ping are from 7½ to 10 per cent.; and for dressing, allowance for culls, and butting, the expense at times is very great.

PROPERTY IN CANADA.—An estimate of the movable and immovable wealth of each colony, and of the property annually created therein, must necessarily afford an indication of their relative degree of importance and progress; but the almost impossibility of obtaining sufficient accurate information on the subject renders it exceedingly difficult to form even an approximate calculation.

Property annually created.—Nearly every male adult in Canada is a producer; the non-productive class, such as paupers, and the number of persons deriving their support from professions or from funded property, is comparatively very small. Taking the population of Eastern and Western Canada at 1,500,000, the value of the necessities and luxuries required for their annual support cannot well be estimated at less than one shilling a-day, or £18 a-year for each individual,—equal to £27,000,000 per annum. If we estimate the amount of property annually produced and not consumed, but added to the movable or immovable property, at sixpence-halfpenny a day for each person, or about £10 per annum = £15,000,000, the total value of the property annually produced in Canada, according to this estimate, is £42,000,000. In round numbers it may be quoted at *fifty million sterling per annum.*

Movable and Immovable Property in Eastern and Western Canada.—There are in the united province five million acres of cultivated and improved land, which, if valued with their farm buildings, &c., at £10 per acre, give a landed property of £50,000,000; about ten million acres of occupied and assessed land, valued at £1 per acre = £10,000,000; and at least fifty million acres unoccupied, but fit for cultivation, at 5s. per acre = £12,500,000. One hundred thousand houses of all kinds, except shanties, at least £50 a house = £5,000,000; furniture, £20 for each house = £2,000,000; apparel and personal property, £5 each person = £7,500,000. Saw and grist mills, manufactories, distilleries, breweries, tanneries, factories, &c., about five thousand, at £200 each = £1,000,000. Timber to the value of at least one million sterling, may be cut annually for the next fifty years = £50,000,000. Horses, 250,000, at £10 each = £2,500,000. Oxen, milch cows,

and young cattle, 800,000, at £4 each = £3,200,000. Sheep, 1,800,000, about 20s. each = £1,800,000. Swine, 1,000,000, at 10s. = £500,000. Ships, steamers, boats, and barges, valued at £1,500,000. Merchandise, about £2,500,000. Capital invested in joint-stock banks and other public companies, £1,500,000. Capital represented by canals, wharfs, docks, and slides, about £6,000,000; roads and streets, £1,500,000; forts, barracks, military works, and government buildings, £2,000,000; churches, gaols, hospitals, nunneries, and public buildings, £2,000,000: the whole giving a grand total of about £117,500,000, as the estimate of the value of movable and immovable property in the province of Canada.

These statements indicate the progress which Canada has made; but it has been asserted that Canada and the other British possessions in North America have evinced little energy or marks of improvement, more particularly when compared with the United States. A writer in the *Quebec Gazette* has undertaken to refute this prevailing idea, and says, that "Facts and figures show that the progress of the North American Colonies of Great Britain, since 1783, when the United States were finally separated from the mother-country, has been nearly equal, all things considered, and, in some respects, superior to that of those States in all the principal points to which the political economist looks for the evidences of prosperity." He then proceeds to compare the progress from 1784 to 1836, in exports, imports, population, and shipping, thus:—

1784.	Impts.	Exports.	Pop.	Tons.
Nova Scotia, C. Breton, and Prince Edward's Island	75000	3500	32000	12000
Canada	500000	150000	113000	95000
Newfoundland	80000	70000	20000	20000
	655000	233500	155000	127000
1836.				
Nova Scotia	1245000	935000	150000	374000
Canada	2588000	1321750	1200000	348000
Newfoundland	632576	8500334	70000	98000
Cape Breton	80000	35000	35000	70000
Prince Edward Island	46000	90000	32500	23800
New Brunswick	250000	700000	164000	347000
	5841586	3987078	1651500	1260800
UNITED STATES.				
1784	4250000	1000000	3000000	500000
1836	16200000	121000000	15000000	2000000

"Now, these figures (collected carefully from the sources of information mentioned underneath,* and

* Holmes' American Annals; Lord Sheffield's Pamphlet on American Trade, 1789; Tench Coxe; Bristid's America; Anderson's commerce; Haliburton's Nova Scotia; Smith's Canada; McGregor's Colonies Martin's

from others) show that the increase of the Shipping of the North American Colonies since 1784 has been nearly tenfold, while that of the United States has been only fourfold; that the population of these Colonies; 'the thews and sinews' of production and enterprise, has increased in the same period ten-fold, while that of the United States has only increased three-fold.

"Under the head of Imports, it is true that the United States have increased about forty-fold, and of Exports more than 120-fold—while we can only count an increase in the former of about nine, and in the latter of about seventeen times. But compare the range of Export and Import in the one case and the other. From 1784, to the present time, our neighbours have had the free range of the world, going and coming; while the Colonies, until comparatively a very recent period, were confined to the trade with the mother-country, and with the other Colonies; and even in the West India market they had to encounter the competition of the Americans, whose greater proximity and cheaper outfit gave them an advantage. Again, it is to be remembered, that in 1784, when the comparison begins, the Americans started in the world with double the population—four times the shipping, six times the import trade, and more than four times the export trade, than the Colonies then had; so that the ratio of increase was not only greater at the outset, but went on increasing by a kind of compound geometrical progression. And, lastly, there was, and is, this important difference and disadvantage to our North American Colonies, that their whole maritime coast line presented but three or four accessible ports suitable for commerce, and that Canada, the principal Colony, is winter-locked six months in the year; while the whole American coast, from Machias to New Orleans, broken and indented with multiplied bays, harbours, rivers, and inlets, is open at all seasons, studded long since with the populous seats of a busy commerce, which had planted itself as early as 1784 in at least ten of the principal positions it now holds.

"These calculations of colonial statistics are so far from being exaggerated, that they may rather be charged by some with being below the truth. It is also to be borne in mind, that in the amount of Colonial exports and imports given above, those of Upper Canada inland and lake trade are not included, the materials of information not being immediately accessible.

"That province, like New Brunswick, has in fact been created out of the wilderness since 1784, (excepting, always, a very small French Acadian population in remote corners of each province), and in no part of the British North American dominions has the expansive power of British enterprise been more remarkably shown than in these two junior provinces."

If the writer had carried his data down to 1848, he would have presented the British North American Colonies in a still more favourable comparative view. Western Canada doubles its population in about 10 years; the United States in 25 years.

Colonial Dictionary; Bliss, Atkinson, and Haliburton's pamphlets on the North American Colonies; Colonial Population Returns.

The British North American colonies are most favourably situated between the Atlantic and Pacific Oceans, possess fisheries, mines, forests, and arable land of almost incalculable value, an extent of continuous navigable waters such as no other country enjoys, and every element conducive to the promotion of individual wealth and happiness. These provinces do not yet contain a population of much more than two million; they could maintain with ease fifty million inhabitants; and at the present rate of increase of cent. per cent. every decade, that number would be attained in less than 50 years.

SUMMARY.—I may perhaps be excused recapitulating some of the leading facts in the history of Canada which well deserve serious consideration, especially at the present critical period in colonial policy.

Since the conquest of Canada from the French in 1759, England has regarded with careful solicitude the affairs of that country: her ablest men have been selected as its governors; civil and religious liberty has been fully conferred upon the Canadians, to whom land has been granted by the Crown with unbounded liberality; the funds of the British exchequer have been spent without stint in the construction of canals, roads, forts, and public works; and the unparalleled naval and military power of England employed in preserving the colonists from hostile incursions. For more than 50 years a monopoly was given to the Canadians for the sale of their timber in the markets of the United Kingdom, and for the vending of their "lumber," fish, and food, in the British West Indian colonies.

The result of this policy, which may without exaggeration be termed maternal, has been a rapid augmentation of individual and of provincial wealth; and an enormous increase of population, accompanied by a more than proportionate augmentation of the necessaries and even luxuries of life. Now, having received from Britain all that a helpless child needs from a kind parent, it is for the Canadians themselves to declare whether they will remain part and parcel of the glorious empire which nurtured their infancy, fostered their more matured growth, and made them participants in every privilege which England so happily possesses. Or misled by demagogues, intoxicated by false doctrines, ungrateful for past benefits, and unmindful of present good, whether they

will repudiate the connection from which they have received such substantial advantages. The separation would be comparatively of little importance to England: she rose triumphant in power after the far greater privation consequent on the declaration of independence of the United American Colonies in 1776; and, under Divine Providence, there was added to her dominions in the *East* a larger and more useful territory than she had lost in the *West*. The annexation of Canada to the United States republic, would but hasten the period when that, like all other extensive *Continental* governments, must, under the operation of disintegrating principles, separate into independent states—a disunion which the experience of every age shews would probably be soon followed by rivalry and hostility.

It would, also, be well for those who favour the idea of separation to "*count the cost*," since, without violating the first principles of justice and common honesty, no declaration of independence could be made on the part of the Canadians without involving the creation of a Canadian debt to reimburse the people of England for the large sums which have been expended from the Home Exchequer in and for Canada. In the ordinary course of private life, what man would be justified in repudiating when it suited his convenience or caprice a connection formed when he was struggling for existence, from which he had derived all the advantage, and of which the burthens had been borne by his colleague.

It is, however, very probable that the opinions concerning the expediency of separation which have been lately promulgated originate in the factious agitation of a few interested or unreflecting individuals, and do not express the deliberate conviction of any considerable portion of either the English or French Canadians.

But let the present clamour arise from what source it may, its injurious effects are beyond dispute: and it is impossible to close the subject without reiterating the hope that the loyalty, good sense, and appreciation of their true interests, which the Canadians have heretofore evinced, may be speedily exerted to extinguish the mischievous theories and idle speculations which are fraught with so much practical evil to Canada, by impeding commerce, preventing the flow of capital and emigration, and diverting the stream from the country which it would fertilize and adorn.

BOOK II.—NOVA SCOTIA.

CHAPTER I—GEOGRAPHICAL POSITION AND HISTORY.

THE province of Nova Scotia is an extensive peninsula, connected with the continent of North America by an isthmus only 8 miles wide. It is situated between $43^{\circ} 25'$ and 46° N. lat., and 61° and $66^{\circ} 30'$ W. long. On the N.E. and N. it is bounded by the Bays of Fundy and Chignecto, the boundary line which separates it from the county of Westmoreland in New Brunswick, Bay Verte, and the Northumberland Strait, which divides it from Prince Edward's Island; on the E. by the Gulf of St. Lawrence and the Gut of Canso, which separates it from Cape Breton Island; and on the S. and W. by the Atlantic Ocean. Its extreme length from E. to W. is stated by Bouchette at 383 English miles, but this is evidently a typographical error, as it cannot exceed 300, and was probably calculated by him at 283. Its breadth varies greatly; between Chester and Black Rock Pier it being about 50 miles, and between Bristol Bay and the head of Bay Verte 104. The area is stated by Haliburton at 15,617 square miles, or 9,994,880 acres.

HISTORY.—Nova Scotia was probably first visited by the Cabots in their voyage of discovery in 1497, but the earliest authentic account we possess concerning its colonization is of the attempt of the Marquis de la Roche, who, by order of Henry IV., sailed from France in 1598, with a number of convicts, forty of whom he landed on the small and barren island of Sable, situate about fifty leagues to the S.E. of Cape Breton, about ten leagues in circumference, interspersed with sand-hills and fresh-water ponds; without any port, and producing nothing but briars.

After cruising some time on the coast of Nova Scotia, the Marquis was compelled by stress of weather to return to France, leaving on Sable Isle the forty unfortunate convicts who had been landed there. Seven years after, twelve only were found alive, in a most wretched and emaciated state, by

Chetodol, the pilot of the Marquis de la Roche, whom the French king sent to bring them back to France.

Acadia was the name given to Nova Scotia, New Brunswick, and part of the State of Maine by the French, and the most vigorous essay on their part for its settlement was made in 1604 by a private gentleman, named De Monts, who obtained from Henry IV. the dominion of the colony and the monopoly of the fur trade throughout its whole extent. An account of his expedition has already been given in the history of Canada. The little colony formed at Port Royal, now Annapolis, was taken possession of in 1614 by the English governor and colonists of Virginia, who claimed the country by right of the discovery of Sebastian Cabot, and considered the French colonists of De Monts as encroachers or intruders on the charter granted to the Plymouth Company, in 1606, which extended to 45° of N. lat.; the right of occupancy being then considered invalid, and the doctrine admitted that in the first instance

“All a man sailed by or saw was his own.”

Eight years elapsed after the destruction of the French settlements in Port Royal and other parts of Acadia before the English began to think of establishing themselves on the peninsula. In 1621 Sir William Alexander applied for and obtained from James I. a grant of the extensive country, lying on the E. side of a line drawn in a northern direction from the river St. Croix to the Gulf of St. Lawrence, which was named in the patent *Nova Scotia*.

About a year after the sealing of this grant, Sir William Alexander despatched a number of emigrants to take possession of the country, who, after wintering at Newfoundland, arrived in the spring of 1623 at Nova Scotia, which they found occupied by the survivors of the French settlers who had remained after the destruction of Port

Royal, to whom were added emigrants from the St. Lawrence and France; under these circumstances the adventurers thought it prudent to return to England, where they published most flattering reports of the beauty, fertility, and salubrity of the region they had so unsuccessfully visited. In 1625 Charles I. confirmed his father's grant to Sir William Alexander, and created the order of Knights Baronets of Nova Scotia, whose members were to contribute their aid to the settlement. Their number was not to exceed 150; they were each to hold jurisdiction over a tract extending three miles along the coast, and ten towards the interior, and to receive in full property 16,000 acres of land. In return, each was bound to fit out six men for the colony, or to pay 2,000 merks. Pre-eminence was to be given them over all knights called *equites aurati*, but none of them were to be baronets of Nova Scotia, or of Scotland, till they had fulfilled the conditions prescribed by his majesty, and obtained a certificate of performance from the governor of the colony. The patents were ratified in parliament.

On the war breaking out between England and France, efforts were made by Sir William Alexander and his friends to drive the French from Nova Scotia, and in 1628, a squadron under Kirtck, the famous French refugee, reduced the forts of Port Royal, St. Croix, and Pentagort; but the French settlement of Cape Sable still held out, nor did the English obtain complete possession of the country. Sir William at length, wearied by the unsatisfactory results of his endeavours, and the heavy expenses attendant on them, conveyed a large section of his territory to Claude de la Tour, a French protestant, who, having been taken prisoner by Kirtck, and sent to England, had been there induced to second Sir William's views by introducing a party of Scotch emigrants into Cape Sable; in this attempt and other subsequent ones he was unsuccessful, in consequence of the determined opposition of his son, who held the fort during his absence. In 1632 Charles I. surrendered Nova Scotia (as before mentioned) to Louis XIII., who immediately took possession of it. At the close of the civil war in England, Oliver Cromwell, who contributed so much to raise the glory of the British name, sent out Major Sedgewick with an armed force, and Nova Scotia again fell into the possession of the English. Only Port Royal, however, was retained by Sedgewick's troops; and

French settlers were suffered to establish themselves in different parts of the country. The son and heir of Claude de la Tour made his submission to the English, and in conjunction with Thomas (afterwards Sir Thomas) Temple and William Crowne, petitioned Cromwell for a grant of the principal part of what now composes Nova Scotia and New Brunswick, in right of the transfer made by Sir William Alexander. This suit was successful. William Crowne Temple purchased La Tour's share, re-established the different settlements, and expended £16,000 in repairing the fortifications; but when the colony was emerging from distress and obscurity, it was ceded to France by the treaty of Breda in 1667.

For the following 20 years the colony enjoyed repose, and some progress was made in establishing fisheries, and extending the fur trade, but upon the renewal of hostilities in 1689, it was still deficient in means of defence, and Port Royal was easily taken by Sir William Phipps, with a squadron from Massachusetts. Phipps, after dismantling the fortress, and burning some other places, quitted the colony, without leaving any garrison behind him. The French, of course, resumed the government, although the English retained a nominal possession, sometimes fighting for a district, at others ravaging the French settlements; until, by the treaty of Ryswick in 1697, the colony was once more restored to, or rather left unmolested under the dominion of France. This peaceful state of things was soon disturbed by the war of the Spanish succession in 1702, and preparations were made for the total subjugation of Nova Scotia to the British arms, with a distinct assurance on the part of the crown, that if again conquered it should not be restored to France.

The first expedition, which consisted of 550 men, was despatched under colonel Church, and 3 years afterwards a force of 1,000 soldiers was sent to complete the conquest of the country; but the ability and energy of Subercase, the French commander, obliged the assailants *twice* to raise the siege of Port Royal with considerable loss.

The New Englanders instead of being disheartened, seem rather to have been stimulated by these failures to more vigorous exertion. After two years of strenuous effort, with the aid of the British government, an armament sailed from Boston Bay

on the 18th September, 1710, under the command of general Nicholson, and arrived at Port Royal on the 24th. Subrease having a garrison of only 260 men, surrendered after a short siege, and obtained an honourable capitulation, which was signed on the 2nd October, and is memorable as the commencement of the permanent annexation of Nova Scotia to the British Crown. In compliance with the terms of this deed, the French troops and governor were removed from the colony; the name of Port Royal was changed to Annapolis in honour of Queen Anne, colonel Vetch was appointed governor, and a council formed of the principal inhabitants, for the management of the civil affairs of the province. The French court became sensible of the extent of their loss, and anxious to re-conquer Port Royal; but the state of affairs in Europe prevented their sending any considerable expedition for that purpose. Offers were made on the part of the king of France, to the merchants of Rochelle, and promises of profit and reward held out, on condition of their forming an association sufficiently powerful to drive the English from the country; similar applications were ineffectually made to the most opulent traders at St. Malo, Nantes, and Bayonne, but no one appeared willing to take charge of the expedition, or to incur the heavy expenses it would necessitate. Vaudreuil, the governor of Canada, was urged to attempt the recovery of Port Royal; but, although fully sensible of its importance, he was deterred by the threatened invasion of his own country. He appointed Baron Castine to the chief command in Nova Scotia, with instructions to foster the hostile feelings of the French settlers towards the English; and he wrote to the priests, urging them to redouble their zeal in retaining the affections of their Indian proselytes. His instructions were fully carried out, and resulted in the renewal of hostilities, in the midst of which peace was concluded between France and England, on the 11th April, 1713.

By the 12th article of this treaty, known as the peace of Utrecht, all Nova Scotia, with its ancient boundaries, as also the city of Port Royal, and the inhabitants of the same, were ceded to Great Britain, "in such ample manner and form, that the subjects of the most Christian king shall be hereafter excluded from all kinds of fishing in the said seas, bays, and other places on the coast of Nova Scotia, that is to say, on

those which lie towards the E., within 30 leagues, beginning from the island commonly called Sable, inclusively, and thence stretching along towards the S.W."

In 1714 general Nicholson arrived as governor, and proposed to the Acadians either to become subjects of the crown of Great Britain, and retain their possessions, with the free enjoyment of their religion as far as was compatible with the laws of England, or to leave the country within a year. The people showed themselves equally reluctant to accept either alternative; the governor having orders not to use harsh measures towards them, knew not how to act, and the prescribed time having elapsed, they were suffered to remain, although they constantly refused to take the oath of allegiance. In 1719 colonel Phillips succeeded to the governorship, and, at length, a large proportion were with difficulty prevailed upon to take the oath. Although no express reservation was made in it, exempting them from bearing arms against the French, yet, there is reason to believe that a promise of not being required to do so was given them, and they were consequently known among the other colonies as the neutral French.

The male population capable of bearing arms, amounted at this period to about 4,000 men; of these from 1,200 to 1,300 were settled in the capital and its neighbourhood, and the rest were dispersed on the several rivers of the province. Neither rents nor taxes were exacted from them, and they were allowed to continue their trade with France and her dependencies. Meanwhile, the Indians, on being informed that they and their lands had been transferred from the French to the English crown, appealed to Vaudreuil, who informed them, that no mention was made either of them or their lands in the treaty of Utrecht, and, although there could be no doubt as to the real meaning of both parties in forming that treaty, he, nevertheless, affected to consider the Indians as an independent people, and maintained among them an interest separate from the English, who vainly endeavoured to keep on friendly terms with them. In 1720 a numerous party of Indians plundered a large fishing establishment, which had been erected by the English at Canseau, and was much frequented during the summer by traders from Massachusetts, carrying off fish and merchandise to the value of £20,000; and

in 1723 they captured at the same place, 17 sail of fishing vessels, with numerous prisoners, 9 of whom they put to death with deliberate cruelty: 7 of these vessels were afterwards retaken with 15 captives, and 1,500 quintals of fish, but not without a severe contest with the Indians, who lost about 30 men on board the several prizes. They shortly afterwards attacked the garrison at Annapolis, burned 2 houses near the fort, killed and scalped a sergeant and a private, and took several prisoners.

The Indians of the western portion of Nova Scotia were a part of the great Abenaki nation, and the whole of these people acknowledged the Baron Castine, a son of the old baron (named in the history of Canada p. 6), by an Indian woman, as their chief sachem or leader. Previous to the affray at Annapolis, Castine had been captured and imprisoned at Boston, but had been released, partly from a dread of exasperating the Indians beyond all hope of reconciliation, and partly from a difficulty of considering him a traitor who had never acknowledged himself a subject. The continued hostilities of the Indians at length obliged the English colonists to solicit the aid of Massachusetts, from whence an expedition, consisting of about 200 men, was sent in 1724 against Norridgewoack, the chief Indian fort on the Kenebec, where they surprised the enemy, defeated them with great slaughter, and put to death le Pere Rallé, a catholic missionary, who had lived among them 40 years. Judge Hali-burton, the talented historian of his native land, gives a most interesting account of Rallé, whose death is stated by Charlevoix to have been accompanied by circumstances of extreme cruelty, whereas Hutchinson declares he was killed by the English in self-defence, when firing upon them, and refusing either to give or take quarter. Castine, who had previously gone to France to take possession of his paternal estate, determined on not returning to the country, and as the destruction of Norridgewoack was followed by decided measures, the savages were for a time overawed.

In 1744 war recommenced between France and England. De Quesnal, governor of Cape Breton, immediately fitted out expeditions, which took Canseau, and twice laid siege ineffectually to Annapolis. De Quesnal was tempted to these proceedings by his knowledge of the unprepared state of the English garrisons, but he acted in dis-

obedience to his instructions, the French government having desired him not to attempt the capture of any post in Nova Scotia until further orders; under the well-grounded apprehension that, as Louisburg was also insufficiently garrisoned, the English colonists might retaliate by attempting the reduction of that important place, which being well situated for fishing, had been fortified by the French at an expense of £1,200,000, with a view to make it the bulwark of their possessions in North America. It was surrounded by a stone wall two miles and a half in circuit, and by a ditch 80 feet wide. Shirley, governor of New England, proposed to attack it, and preparations were made with great energy for the dangerous enterprise, the enthusiasm of the troops (consisting solely of militia and volunteers) being increased by the preaching of Mr. Whitfield, the famous dissenting minister, who furnished a motto, while a chaplain carried on his shoulder a hatchet to demolish images. Massachusetts contributed 3,200 men, Connecticut 500, and New Hampshire 300, who embarked in a number of small vessels, and arrived in April, 1745, at Canseau. Here they were joined by commodore Warren with the fleet from the West India station, and on the 30th April they came in view of Louisburg, and being wholly unexpected, succeeded in easily effecting a landing. Their worst labour was in getting their cannon on shore, and for a fortnight they sustained the toil and danger of drawing it through a morass, where they were up to their knees in mud, and exposed to the enemy's fire. The batteries were not completed until the end of May, and the place was so strong that the besiegers were five times repulsed, and might eventually have been compelled to raise the siege, but for the capture of the *Vigilant*, a line-of-battle ship containing 560 men and supplies, upon which Duchambon the governor, whose works were considerably damaged, and his garrison disposed to mutiny, capitulated on the 18th June.

The reduction of the island of St. John (now Prince Edward), soon followed, and by hoisting the French flag on the captured forts, two East Indians and a South Sea ship, whose cargoes were valued at £600,000, were decoyed into them. The news of these events created a powerful effect on the conduct of both the English and French governments. The French were greatly alarmed, and determined to seek

without delay the recovery of Cape Breton, and the conquest of Nova Scotia. They accordingly fitted out a squadron composed of 70 sail, of which 11 were ships of the line, 20 frigates, 5 ships and bombs, and the rest tenders and transports, having on board 3,150 disciplined troops. The fleet sailed from Brest early in the summer of 1746, under the command of the Duke D'Anville, an officer of great ability and experience, and passed unnoticed a squadron under admiral Martin, which had been dispatched by the English to watch its motions.

Admiral Listocq left Portsmouth in pursuit of it, but was several times driven back by contrary winds; and being compelled to abandon all hopes of overtaking the French armament, the colonies were left to their own defences. The good fortune of the duke, however, did not continue—his passage was perilous and protracted beyond example, and on reaching Chebucto (now Halifax) 4 ships of the line were so shattered as to be obliged to return to Europe, while 3 sent under admiral Conflans to the West Indies, had touched at the point of rendezvous; but not finding the fleet, had also set sail homewards. D'Anville, cruelly mortified by these disappointments, died suddenly on the fourth day after his arrival. In the afternoon of the same day vice-admiral Distournelle, with 3 or 4 ships of the line, rejoined the squadron, and, in a council of war, proposed returning to France, but was strenuously opposed by Monsieur de la Jonquière, governor of Canada, who maintained that their condition fully justified them in making an attempt upon Annapolis, and his opinion was maintained by the majority.

The vice-admiral was thrown, by harass and anxiety, into a fever; and becoming delirious, he imagined himself a prisoner, and ran himself through the body. La Jonquière assumed the command, and proceeded against Annapolis. In rounding Cape Sable they encountered a fearful storm, by which they were so much dispersed and weakened that they turned back and steered for Europe. The complete failure of this mighty armament was looked upon by the English colonists as a special interposition of Providence, and celebrated by a general thanksgiving. Still the French persevered. De la Jonquière, having returned to France with the remnant of the Duke D'Anville's fleet, was immediately sent to Nova Scotia with 38 sail; but the English admirals Anson

and Warren having started in pursuit of them, a well contested battle took place on the 3rd of May, 1747, which ended in a complete victory on the part of the English, who captured a French man-of-war, 4,000 or 5,000 prisoners, and 6 richly laden Indiamen, which were under the convoy of the French fleet.

By the treaty of Aix la Chapelle in 1748, peace was concluded between France and England; and the English colonists, by the articles of this peace, were compelled to surrender Cape Breton and Louisburg, which they had obtained with so much skill and bravery, the British ministry having consented to restore them to France on condition of the Low Countries being yielded to their ally, the empress-queen of Hungary, to maintain the balance of power in Europe. Meanwhile Britain had become aware of the importance of Nova Scotia; and the peace having left a great many military out of employment, the idea was formed of settling the disbanded troops in this part of America. This project was warmly taken up by the Earl of Halifax, then President of the Board of Trade and Plantations. Fifty acres were apportioned to every private, with 10 additional for each member of his family; a higher allowance was granted to officers in proportion to their rank, till it amounted to 600 for all above the rank of captain. Land was also offered to civil settlers according to their means, with the advantage of being conveyed with their families to the colony, maintained there one year after their arrival, supplied with arms and ammunition for their defence, and with the necessary materials for clearing their land, erecting houses, and prosecuting the fishery, all at the expense of the British government. Thus encouraged, 3,760 adventurers embarked with their families, in May, 1749, and landed at Chebucto harbour, under the command of the honourable Edward Cornwallis, who had been appointed governor, and whose energy and perseverance contributed greatly to the speedy establishment of the town of Halifax.

The Imperial Parliament continued to support the colony by annual grants, which in 1755 amounted to £415,584 (see Haliburton, p. 142).

In spite of their numerous advantages and military habits, the English suffered greatly from the desultory warfare carried on against them by the Indians, who, though they at first made some friendly overtures,

were soon induced by their old allies, to renew a system of avowed hostility. Disputes with the French concerning the boundary line, formed another fruitful source of annoyance, the French government taking advantage of an ambiguity in the wording of the treaties of cession, and contending that the British dominion extended only over the peninsula separated from the continent, by the Bays of Fundy and Chignecto; while the English maintained that their limits reached from the St. Croix to the St. Lawrence, and consequently included the fine country now called New Brunswick. The French settlers under the name of neutrals proved themselves deserving of a very different appellation, and instigated by the crafty and inexcusable policy pursued by the French court, they, aided by the Indians, kept the British in constant alarm, till, in April, 1755, the war recommenced by admiral Boscawen's capturing several French vessels on the coast of Newfoundland. Two months after lieutenant-colonel Monckton, at the head of a force which had been rapidly formed in New York, invested a fort named Beau Sejour, recently erected by the French on the narrow isthmus which connects Nova Scotia with New Brunswick, and after four days' bombardment, obliged it to surrender. The following day Monckton attacked and reduced another stronghold, situated upon the river Gaspereaux, which runs into Bay Vert, and took possession of a large quantity of provisions and stores of all kinds which he found there. Meanwhile captain Rowe, with his ships, sailed to the mouth of the river St. John, but they found the French had abandoned their post after destroying, as far as they had time, all the fortifications they had lately raised. The success of this expedition was so decided as to secure the temporary cessation of hostilities, but the local government were at a loss to know what course to pursue with regard to the Acadians, as the French settlers were called, whose numbers amounted to 17,000 or 18,000, and who, there was reason to fear, would assist the French, should they attempt the invasion of the colony. The course of action the authorities at length decided upon cannot be justified even by the extremely difficult position in which they were placed. They assembled the Acadians in their respective settlements, under the pretence of making some communications relative to their welfare, and then, without previous notice, forced them on board several vessels

provided for the purpose, and dispersed them through New England, New York, and Virginia. The details of these arbitrary proceedings are fully given by Judge Haliburton in his *History of Nova Scotia*, and fully and feelingly commented upon; but it is not necessary here to enter into the particulars of this painful subject. Suffice it to quote Haliburton's concluding sentence. "If the Acadians had to lament that they were condemned unheard, that their accusers were also their judges, and that their sentence was disproportioned to their offence; they had also much reason to attribute their misfortunes to the intrigues of their countrymen in Canada, who seduced them from their allegiance to a government which was disposed to extend to them its protection and regard, and instigated them to a rebellion, which it was easy to foresee would end in their ruin." Many of these expelled and deported settlers, however, returned after the peace of 1763, and established themselves in and about the townships of Clare, Yarmouth, and Argyle, where their descendants now form a large industrious and useful part of the population.

In 1758 a constitution was granted to Nova Scotia, consisting of a House of Assembly, a Legislative Council, and a governor representing the British crown; and numerous New England immigrants settled on the vacant lands of the unfortunate Acadians. The capture of Louisburg, in Cape Breton, from the French, in 1758, gave additional security to the colony, which now began to improve.

In 1761, the Indians for the first time entered into a formal treaty, to "bury the hatchet," and accept George III., instead of the king formerly owned by them, as their Great Father and friend. On the accession of George IV. to the crown of Great Britain, and the consequent election of a new House of Assembly, the number of representatives was increased to 24, namely 2 for each of the counties of Halifax, Lunenburg, Annapolis, and King's, 4 for Halifax township, and 2 for each of the townships of Lunenburg, Annapolis, Horton, Cornwallis, Falmouth, and Liverpool. By the treaty of Paris in 1762, France resigned all claims to any of her former possessions in this part of the North American continent. In this year the township of Londonderry was settled by Irish emigrants, and that of Horton by New Englanders.

In 1784 New Brunswick and Cape Breton

were separated into two distinct governments, but the latter was subsequently (in 1819) united to Nova Scotia. Its history and description will be given in a separate chapter.

In 1787 his majesty erected the province of Nova Scotia into a bishop's see, and appointed Charles English the first bishop. The arrival in the colony on the 29th of October, 1787, of his royal highness Prince William Henry (subsequently King William IV.), gave occasion for much rejoicing. In 1798 a dreadful storm and gale of wind at Halifax, destroyed shipping, wharfs, and other property, of the value of £100,000. On the 18th May, 1799, the appointment of his royal highness the Duke of Kent as commander-in-chief of the British forces in British North America was announced, and on the 12th September, the province voted an address to his royal highness, who on the 5th February, 1801, in a public despatch, urged the formation of a road between Halifax and Quebec. From this period to 1839 there were no leading events worthy of record. The colonists distinguished themselves by loyalty and industry; during the American war they raised a militia for their own defence, and during the French revolutionary war they cheerfully contributed their mite towards enabling England to subdue the anarchists of France.

Mr. Murdoch remarks in his *Life of Lord Sydenham* (p. 174), that "in Nova Scotia, as in Upper Canada, the population had gradually outgrown the monopoly of power in the hands of a few large families, which seems to be the almost necessary condition of colonies in their infant state. There, as in Upper Canada, the popular branch of the legislature chafing against the passive resistance of the executive, had addressed the crown in language which, under a better system, would probably never have been heard. They had asked for the removal of their governor, and had not obscurely hinted at the stoppage of supplies." On the arrival of the Earl of Durham in Canada as her majesty's high commissioner and governor-general in 1838, a deputation, consisting of Mr. Johnston, solicitor-general, Mr. Uniacke, a member of the Executive Council, Mr. Young, member of the House of Assembly, and Mr. Almon, banker and merchant, were sent from Halifax to Quebec by the then lieutenant-governor, Sir Colin Campbell, to confer with the Earl of Durham on the affairs of the colony.

These deputies, in conjunction with their

colleagues from New Brunswick and Prince Edward Island, expressed in an address to Lord Durham, dated Quebec, 22nd September, 1838, their gratification at the warm interest which the governor-general took in the welfare of the colony which they represented, and their admiration of the enlightened and comprehensive views of his lordship. The Earl of Durham, in his despatch to Lord Glenelg, of 13th September, 1838, stated his belief that the deputies from Halifax and Prince Edward Island, were all "impressed with the necessity of a general union of the provinces, as the most likely measure to preserve their connexion with the British crown;" and as her majesty's high commissioner, his lordship stated in his report to the queen, that he knew "of but one difficulty in the way of such an union, and that arises from the disinclination which some of the lower provinces might feel to the transference of powers from their present legislatures to that of the union;"—an objection which he supposed would arise principally from the local legislatures not liking to give up the immediate control which they possessed over their respective colonial revenues. The proposition was supported in 1814 by the late Duke of Kent—(see *History of Canada*, p. 32),—was under the consideration of the Earl of Durham in 1838, and is now a prominent topic of discussion in British America. An association of delegates, calling itself the "British-American League," has been holding meetings at Kingston, in Western Canada, and after sitting as a convention for six days, it issued, on 31st July, 1849, a long address to all the subjects of the British crown in North America. In this address there is no discussion respecting separation from Britain; the convention, consisting of a president, six vice-presidents, two secretaries, a treasurer, and an executive committee of ten, direct all the attention of their "fellow-countrymen" to three points, viz.: "a union of all the British-American provinces;" "retrenchment and economy in the public expenditure;" and "a protection to home industry." It is declared in the "address," that by a federal union of Nova Scotia and the other North American colonies with Canada, the foundations would be laid for "making the country a great nation on a solid and enduring basis. Impressed with the weight of such a measure, but uncertain as to the sentiments of the sister colonies, this convention has pro-

posed a conference with those provinces by a delegation of some of its members. Meanwhile it recommends this great question to mature deliberation. The American correspondent of the London *Times* observes, (16th August, 1849) on this subject,—“An union of all the North American provinces has been much talked of, but as this would place the French party in a minority, it would of course, meet every opposition from them.”

The topic is now under consideration in Nova Scotia. It is not within the scope of this work to express any party view of the advantages or disadvantages which might or might not result from such a contemplated union. The Earl of Durham, in his report to the queen, on 31st of January, 1839, expresses fully his opinions on the matter; and as it is one deserving of great consideration, not only by *all* the North American Colonies, but also by the Imperial Parliament, by her majesty's government, by merchants, and other persons having commercial, pecuniary, or personal relations with British America, I give the following interesting and comprehensive view of the question from the report of his lordship:

“While I convince myself that such desirable ends would be secured by the legislative union of the two provinces (Eastern and Western, or Upper and Lower Canada), I am inclined to go further, and inquire whether all these objects would not more surely be attained, by extending this legislative union over all the British provinces in North America; and whether the advantages which I anticipate for two of them, might not, and should not in justice be extended over all. Such an union would at once decisively settle the question of races; it would enable all the provinces to co-operate for all common purposes; and, above all, it would form a great and powerful people, possessing the means of securing good and responsible government for itself, and which, under the protection of the British empire, might in some measure counterbalance the preponderant and increasing influence of the United States on the American continent. I do not anticipate that a colonial legislature thus strong and self-governing, would desire to abandon the connection with Great Britain. On the contrary, I believe that the practical relief from undue interference, which would be the result of such a change, would strengthen the present bond of feelings and interests; and that the connection would only become more durable and advantageous, by having more of equality, of freedom, and of local independences. But at any rate, our first duty is to secure the well-being of our colonial countrymen; and if in the hidden decrees of that wisdom by which this world is ruled, it is written, that these countries are not for ever to remain portions of the empire, we owe it to our honour to take good care, that, when they separate from us, they should not be the only countries on the American continent in which the Anglo-Saxon race shall be found unfit to govern itself.

“I am in truth, so far from believing that the increased power and weight that would be given to these colonies by union would endanger their connection with the empire, that I look to it as the only means of fostering such a national feeling throughout them as would effectually counterbalance whatever tendencies may now exist towards separation. No large community of free and intelligent men will long feel contented with a political system which places them, because it places their country in a position of inferiority to their neighbours. The colonist of Great Britain is linked, it is true, to a mighty empire; and the glories of its history, the visible signs of its present power, and the civilization of its people, are calculated to raise and gratify his national pride. But he feels, also, that his link to that empire is one of remote dependence; he catches but passing and inadequate glimpses of its power and prosperity; he knows that in its government he and his own countrymen have no voice. While his neighbour on the other side of the frontier assumes importance from the notion that his vote exercises some influence on the councils, and that he himself has some share in the onward progress of a mighty nation, the colonist feels the deadening influence of the narrow and subordinate community to which he belongs. In his own and in the surrounding colonies, he finds petty objects occupying petty, stationary, and divided societies; and it is only when the chances of an uncertain and tardy communication bring intelligence of what has passed a month before on the other side of the Atlantic that he is reminded of the empire with which he is connected. But the influence of the United States surrounds him on every side, and is for ever present. It extends itself as population augments and intercourse increases; it penetrates every portion of the continent into which the restless spirit of American speculation impels the settler or the trader; it is felt in all the transactions of commerce, from the important operations of the monetary system down to the minor details of ordinary traffic; it stamps, on all the habits and opinions of the surrounding countries, the common characteristics of the thoughts, feelings, and customs of the American people. Such is necessarily the influence which a great nation exercises on the small communities which surround it. Its thoughts and manners subjugate them, even when nominally independent of its authority. If we wish to prevent the extension of this influence, it can only be done by raising up for the North American colonist some nationality of his own; by elevating these small and unimportant communities into a society having some objects of a national importance; and by thus giving their inhabitants a country which they will be unwilling to see absorbed even into one more powerful.

“While I believe that the establishment of a comprehensive system of government, and of an effectual union between the different provinces, would produce this important effect on the general feelings of their inhabitants, I am inclined to attach very great importance to the influence which it would have in giving greater scope and satisfaction to the legitimate ambition of the most active and prominent persons to be found in them. As long as personal ambition is inherent in human nature, and as long as the morality of every free and civilized community encourages its aspirations, it is one great business of a wise government to provide for its legitimate development. If, as it is commonly asserted, the disorders of these Colonies have, in great measure

been fomented by the influence of designing and ambitious individuals, this evil will best be remedied by allowing such a scope for the desires of such men as shall direct their ambition into the legitimate chance of furthering, and not of thwarting, their government. By creating high prizes in a general and responsible government, we shall immediately afford the means of pacifying the turbulent ambitions, and of employing in worthy and noble occupations the talents which now are only exerted to foment disorder. We must remove from these Colonies the cause to which the sagacity of Adam Smith traced the alienation of the provinces which now form the United States: we must provide some scope for what he calls 'the importance' of the leading men in the colony, beyond what he forcibly terms the present 'petty prizes of the paltry raffle of colonial faction.' A general legislative union would elevate and gratify the hopes of able and aspiring men. They would no longer look with envy and wonder at the great arena of the bordering federation, but see the means of satisfying every legitimate ambition in the high offices of the judicature and executive government of their own union.

"Nor would an union of the various provinces be less advantageous in facilitating a co-operation for various common purposes, of which the want is now very seriously felt. There is hardly a department of the business of government which does not require, or would not be better performed, by being carried on under the superintendence of a general government: and when we consider the political and commercial interests that are common to these provinces, it appears difficult to account for their having ever been divided into separate governments, since they have all been portions of the same empire, subject to the same crown, governed by nearly the same laws and constitutional customs, inhabited, with one exception, by the same race, contiguous and immediately adjacent to each other, and bounded along their whole frontier by the territories of the same powerful and rival state. It would appear that every motive that has induced the union of various provinces into a single state, exists for the consolidation of these colonies under a common legislature and executive. They have the same common relation to the mother country; the same relation to foreign nations. When one is at war, the others are at war; and the hostilities that are caused by an attack on one, must seriously compromise the welfare of the rest. Thus the dispute between Great Britain and the State of Maine, appears immediately to involve the interests of none of these colonies, except New Brunswick or Lower Canada, to one of which the territory claimed by us must belong. But if a war were to commence on this ground, it is most probable that the American government would select Upper Canada as the most vulnerable, or, at any rate, as the easiest point of attack. A dispute respecting the fisheries of Nova Scotia would involve precisely the same consequences. An union for common defence against foreign enemies is the natural bond of connection that holds together the great communities of the world; and between no parts of any kingdom or state is the necessity for such an union more obvious than between the whole of these colonies.

"Their internal relations furnish quite as strong motives for union. The Post-office is at the present moment under the management of the same imperial establishment. If, in compliance with the reasonable demands of the Colonies, the regulation of a matter

so entirely of internal concern, and the revenue derived from it, were placed under the control of the provincial legislatures, it would still be advisable that the management of the Post-office throughout the whole of British North America should be conducted by one general establishment. In the same way, so great is the influence on the other provinces of the arrangements adopted with respect to the disposal of public lands and colonization in any one, that it is absolutely essential that this department of government should be conducted on one system, and by one authority. The necessity of common fiscal regulations is strongly felt by all the colonies; and a common custom-house establishment would relieve them from the hindrances to their trade, caused by the duties now levied on all commercial intercourse between them. The monetary and banking system of all is subject to the same influences, and ought to be regulated by the same laws. The establishment of a common colonial currency is very generally desired. Indeed, I know of no department of government that would not greatly gain, both in economy and efficiency, by being placed under a common management. I should not propose, at first, to alter the existing public establishments of the different provinces, because the necessary changes had better be left to be made by the united government; and the judicial establishments should certainly not be disturbed until the future legislature shall provide for their reconstruction on an uniform and permanent footing. But even in the administration of justice, an union would immediately supply a remedy for one of the most serious wants under which all the provinces labour, by facilitating the formation of a general appellate tribunal for all the North American colonies.

"But the interests which are already in common between all these provinces are small in comparison with those which the consequences of such an union might, and I think I may say assuredly would, call into existence; and the great discoveries of modern art, which have, throughout the world, and nowhere more than in America, entirely altered the character and the channels of communication between distant countries, will bring all the North American colonies into constant and speedy intercourse with each other. The success of the great experiment of steam navigation across the Atlantic, opens a prospect of a speedy communication with Europe, which will materially affect the future state of all these provinces. In a despatch which arrived in Canada after my departure, the Secretary of State informed me of the determination of your Majesty's government to establish a steam communication between Great Britain and Halifax; and instructed me to turn my attention to the formation of a road between that port and Quebec. It would, indeed, have given me sincere satisfaction, had I remained in the province, to promote, by any means in my power, so highly desirable an object; and the removal of the usual restrictions on my authority as governor-general, having given me the means of effectually acting in concert with the various provincial governments, I might have been able to make some progress in the work. But I cannot point out more strikingly the evils of the present want of a general government for these provinces, than by adverting to the difficulty which would practically occur, under the previous and present arrangements of both executive and legislative authorities in the various provinces, in attempting to carry such a plan into effect. For the various colonies have no more

means of concerting such common works with each other, than with the neighbouring states of the union. They stand to one another in the position of foreign states, and of foreign states without diplomatic relations. The governors may correspond with each other: the legislatures may enact laws, carrying the common purposes into effect in their respective jurisdictions; but there is no means by which the various details may speedily and satisfactorily be settled with the concurrence of the different parties. And, in this instance, it must be recollected that the communication and the final settlement would have to be made between, not two, but several of the provinces. The road would run through three of them; and Upper Canada, into which it would not enter, would, in fact, be more interested in the completion of such a work than any even of the provinces through which it would pass. The colonies, indeed, have no common centre in which the arrangement could be made, except in the Colonial Office at home; and the details of such a plan would have to be discussed just where the interests of all parties would have the least means of being fairly and fully represented, and where the minute local knowledge necessary for such a matter would be least likely to be found.

"The completion of any satisfactory communication between Halifax and Quebec, would, in fact, produce relations between these provinces, that would render a general union absolutely necessary.

"With respect to the two small colonies of Prince Edward's Island and Newfoundland, I am of opinion, that not only would most of the reasons which I have given for an union of the others, apply to them, but that their smallness makes it absolutely necessary, as the only means of securing any proper attention to their interests, and investing them with that consideration, the deficiency of which they have so much reason to lament in all the disputes which yearly occur between them and the citizens of the United States, with regard to the encroachments made by the latter on their coasts and fisheries."

When her majesty's government sent Mr. P. Thomson, in 1840, to effect an union between the two Canadas, he was instructed to ascertain the state of affairs in Nova Scotia, and a full discretion was left to him as governor-general, respecting any measures he might recommend. The circular letter of Lord John Russell, of 16th October, 1839 (see History of Canada, p. 38), relating to the tenure of offices during the pleasure of the crown, was communicated by the lieutenant-governor, sir Colin Campbell, to the Nova Scotia House of Assembly, and eagerly hailed as a recognition of their claims for responsible government, and as imposing henceforth on the lieutenant-governor the obligation of dismissing or remodelling his council whenever it ceased to enjoy the confidence of the representatives of the people. The House of Assembly, therefore, on 5th February, 1840, by a majority of 30 to 12, passed a series of resolutions, and forwarded them to the lieutenant-governor, who declined to adopt a policy which he considered

would be a fundamental change in the colonial constitution. The following is a copy of the address of the House of Assembly:—

"To his Excellency Lieutenant-General Sir Colin Campbell, Lieutenant-Governor and Commander-in-Chief in and over Her Majesty's province of Nova Scotia and its dependencies, &c. &c. &c.

"The humble Address of the House of Representatives in General Assembly.

"May it please your Excellency,

"We, Her Majesty's dutiful and loyal subjects, the representatives of Her Majesty's loyal people of Nova Scotia, having, under a solemn sense of duty, passed the annexed resolutions, beg leave to recommend them to your Excellency's favourable consideration.

"In the House of Assembly, 5th February, 1840.

"Mr. Clements, the Chairman of the Committee of the whole house on the general state of the province, reported the following resolutions:—

"*Resolved*,—1. That it is the opinion of this Committee that for many years the best interests of this province have been jeopardized, and its progress retarded, by the want of harmony between the different branches of the Government, and the absence of that cordial co-operation between the representatives of the people and those who conducted the local administration, which, in the view of this Committee, is highly desirable, if not indispensable, in every British colony to which a constitution modelled after that of the mother country has been granted by the Crown.

"*Resolved*,—2. That it is the opinion of this Committee that in the course of the struggle which since 1837 the House of Assembly has maintained, with a view to reduce the expenses, improve the institutions, and purify the administration of the country, it has been met at every step by an influence which, while it was beyond the control of the Assembly, has wielded the whole power and patronage of the government to baffle its efforts, and thwart the wise and benevolent policy avowed by Her Majesty's ministers.

"*Resolved*,—3. That it is the opinion of this Committee that in approaching many of the important questions to be disposed of in the present session, the House of Assembly feels embarrassment and difficulty which it would be unwise to conceal either from the Government or the country at large; and that it can anticipate no satisfactory settlement of those questions until the Executive Council is so remodelled as to secure to the House of Assembly the aid of the local Administration in carrying out the views of the Assembly, and in facilitating any negotiation which it may be necessary to conduct with Her Majesty's Government.

"*Resolved*, therefore, 4. That it is the opinion of the Committee that the House of Assembly, after mature and calm deliberation, weary of seeing the revenues of the country and the time of its representatives wasted, the people of Nova Scotia misrepresented to the Sovereign, and the gracious boons of the Sovereign marred in the transmission to the people, do now solemnly declare that the Executive Council, as at present constituted, does not enjoy the confidence of the Commons."

On the 9th of July, 1840, the governor-general arrived from Quebec at Halifax, and in obedience to the commands of the queen, temporarily assumed the government

of the colony; of which the lieutenant-governorship was in the hands of Sir Colin Campbell.

On the 27th of July, the governor-general recommended to Lord John Russell, then her majesty's Secretary of State for the Colonies certain changes in the Legislative and Executive Councils of the province; he considered that the Executive Council was composed in a way which, whilst it created dissatisfaction, afforded the government no assistance or strength whatsoever; that the queen did not derive from her officers that aid in the management of public affairs in the legislature, which was absolutely indispensable for them in the management of a colony, and that as a necessary result the government did not and could not perform one of its first duties, namely, to propose and submit to the colonial legislature, with the full weight of its authority, whatever measures might appear requisite for the good government of the province, the very consideration of which would divert the minds of active and ambitious men from the agitation of abstract points of government. The principle recommended by the governor-general, was that the Executive Council should comprise only the leading official servants of the government, and a few of the most influential members of the Legislative Council, and of the House of Assembly, but especially of the latter. Next, that the law officers of the crown, and any other public servants whose services it might be desirable to obtain, should be required, when necessary, to become members of the House of Assembly, as well as of the Executive Council, in order to afford their assistance there; and that their whole undivided time and talents should be at the disposal of government. In the Legislative Council it was proposed to make additions from the popular party in order to remove the imputation of an exclusive character; and by such modifications it was hoped to bring the Executive and Legislative Councils into more harmony with the general opinions of the House of Assembly, or popular branch of the legislature. By direction of Lord John Russell these reforms were carried into effect, under the administration of Lord Falkland, who had been ap-

pointed to succeed Sir C. Campbell; since that time the province has been free from internal dissension, and although such changes were opposed by some, they have undoubtedly been satisfactory to the great majority of the colonists, and by a prompt compliance with reasonable requests, disturbances which no subsequent concessions would have been sufficient to allay, have been avoided. Viscount Falkland received great credit for the judicious manner in which he effected the important change in the colonial government. Lord Sydenham (Mr. P. Thompson), in a letter dated Montreal, 12th of May, 1841, to Lord Falkland (who is now governor of Bombay), says,—“I have watched your proceedings with great anxiety, and am much gratified at the result. I think it in the highest degree creditable to your tact and judgment. I enter completely into the difficulties of which you speak, in carrying out improvements notwithstanding your *governmental* majority, as they term that sort of thing in France. It is the misfortune of all popular governments in our colonies, the people are made legislators before they have either intelligence or education to know how to set about their work; and, as under such circumstances, selfishness and preference of their little local jobs, to any views of general advantage, must prevail amongst them, the progress of practical improvement cannot but be slow. But do not despair, you have certainly no grounds whatever to do so, for you have achieved a vast deal even in this your first session.” The further history of the province does not present any facts worthy of detail. The following is a list of the English governors:—

1749. Hon. E. Cornwallis.
1752. P. Hopson.
1754. C. Lawrence.
1756. R. Moncton.
1760. J. Belcher.
1764. M. Wilmot.
1766. M. Franklin.
— Lord W. Campbell.
1772. M. Franklin.
— Lord W. Campbell.
1773. F. Legge.
— M. Franklin.
1776. M. Arbuthnott.
1778. R. Hughes.
1781. Sir A. S. Hammond.
1782. J. Parr.
— Sir A. S. Hammond.
1783. E. Fanning.
1791. R. Bulkely.
1792. J. Wentworth.

1808. Sir G. Prevost.
— A. Croke.
1809. Sir G. Prevost.
1811. Sir J. Sherbrooke.
1811. Gen. Darroek.
1814. Sir J. Sherbrooke.
1816. Gen. Smyth.
1816. Earl of Dalhousie.
1818. M. Wallace.
1819. Lord Dalhousie.
1820. Sir J. Kempt.
1824. M. Wallace.
1825. Sir J. Kempt.
— M. Wallace.
— Sir J. Kempt.
1828. M. Wallace.
— Sir P. Maitland.
1834. Sir C. Campbell.
1840. Lord Falkland.
1846. Sir John Harvey.

CHAPTER II.

AREA, PHYSICAL ASPECT, HIGHLANDS, LAKES, RIVERS, HARBOURS, GEOLOGY, MINERALOGY, SOIL, CLIMATE, DISEASES, AND MORTALITY.

NOVA SCOTIA has a smaller area than any of the British North American provinces, except Prince Edward's Island, but its importance as a naval station, its geographical and peninsular position, numerous harbours, extensive coal-fields, and lucrative fisheries, confer on the colony a value far superior to that to which it is entitled by its mere territorial extent, which is about 15,517 square miles.

Above 8,000 square miles are stated to be occupied by lakes and rivers of various shapes and sizes, so distributed that there is no point in the province 30 miles from navigable water. The number of small lakes is very great, especially on the southern side of the peninsula; nearly a hundred are to be found between Halifax and St. Margaret's Bay, scattered over a tract of country not exceeding 20 miles in length or breadth. The face of the country is pleasingly diversified with hill and dale, but the elevations are of inconsiderable height; the highland ranges seldom exceed 500 feet above the level of the sea, and run through the country generally from E. to W. Bouchette states, that the highest hills do not exceed 600 feet; but Major Robinson, who surveyed a large portion of the province in the year 1848, states, that the Cobequid Hills, which extend along the N. shore of the Bay of Mines, and very nearly across to the shore at the Straits of Northumberland, average in height from 800 to 1,000 feet, the lowest point being found at Folly Lake, 600 feet above the sea. In breadth the range preserves a nearly uniform width of about 10 miles. A belt of broken land, whose height averages about 500 feet, and whose breadth varies from 20 to 60 miles, runs along the shores washed by the Atlantic from Cape Canso to Cape Sable, occasionally forming bold cliffs on the coast, the most remarkable of which is Aspotagoen, between Mahone and Margaret's Bay. Another ridge extends on the W. coast, between Argyle and St. Mary's Bay; and, as before observed, a more lofty and extensive range skirts the Bay of Fundy, from Annapolis to Mines Basin.

Lakes.—Of the numerous lakes the largest is Lake Rosignol, which is said to be 30 miles in length, and is situate partly in each of the three counties of Queen's, Shelburn, and Annapolis. It is the source of the Liverpool River—the Mersey; and in the same section of country there are several other lakes, approaching within a short distance of the Mersey, and communicating with the head of Allan's River, running into Annapolis Bay. Lake George, another lake of considerable size, and 70 or 80 small ones, are situate in the township of Yarmouth. A chain of lakes stretches from the head of the river Shubenacadie nearly to the harbour of Halifax, and, with the Shubenacadie Canal, completes the water communication quite across the province. Similar chains of lakes exist between Windsor and St. Margaret's Bay, between the head of the Avon and Chester, and between the river Gaspereaux in King's County, and Gold River, in the county of Lunenburg.

Rivers.—The two principal rivers in the province are, the Shubenacadie before mentioned, and the Annapolis: the former takes its rise in Grand Lake, in the county of Halifax, and after a rapid and circuitous course, the length of which has not yet been accurately ascertained, it disembogues in Cobequid Bay. This fine stream is navigable for large vessels some distance into the interior, its banks are adorned with extensive groves of lofty timber, and contain inexhaustible stores of gypsum and lime; the scenery is picturesque;—varied by the abrupt frowning cliff with its woody summit, the verdant and cultivated vale, the wilderness with its deep solitudes, and the busy hum of civilized society. The rise and fall of the tide at the mouth of this river is about 50 feet.

The Annapolis takes its rise in the township of Cornwallis, in King's County, and after a long and serpentine route falls into Annapolis Bay; having previously received the waters of the Moose and Bear Rivers. It is navigable for large vessels for 20 miles above Annapolis, and 40 above Digby, and

for large boats to a much greater distance. At Pictou the East, West, and Middle Rivers, all three navigable for large vessels, empty themselves into the harbour. The Avon receives the waters of the St. Croix, Kennetcook, and several others, and empties itself into the Bay of Mines; it is navigable for a considerable distance: at Windsor the rise and fall of the Avon is 20 feet at neap, and 30 at spring tides.

The country along the banks of the Avon is extremely beautiful; the luxuriance of the meadows; the frequent changes of scenery; the chain of high hills on the S. and W., clothed with variegated foliage, and the white sails of vessels passing rapidly through the serpentine windings of the Avon and St. Croix, are some of the leading features of the landscape. A bridge has been commenced to span the Avon at Windsor, where the extreme breadth is 1,050 feet. There is a small military post on elevated land at Windsor, called Fort Edward, in honour of his Royal Highness the late Duke of Kent. The fort is advantageously placed, and commands the entrance of both rivers.

The La Have, Mersey, and Medway; the Shelburne (which forms the fine harbour of that name); the Clyde, which is considered one of the most beautiful rivers in Nova Scotia; the Tusket, with its numerous branches; the St. Mary, which crossing nearly the whole county of Sydney from N. to S., forms the harbour of St. Mary; the Maccan, Nappan, and Gaspereaux; the Musquedoboit, Sale, and Jordan; these are but a few selected from the multitude of rivers, many of which nearly equal them in magnitude, whose streams fertilize and adorn the province. It is a singular fact, that while the tide rises with extraordinary rapidity to the height of 75 feet in the Bay of Mines and Chignecto, it does not rise more than 6 feet in Pictou Harbour on the south shore. The Gut of Canso, which separates Nova Scotia from the island of Cape Breton, is 21 miles in length, and varies from 1 to 1½ in breadth. The land rises boldly on either side, and the strait being the most convenient passage to and from the Gulf of St. Lawrence, is crowded during the summer and autumn with vessels of every description, which, together with the cottages of the little villages, situate on its banks, produce a pleasing effect.

Harbours.—In number, capacity, and security, the harbours of Nova Scotia are unsurpassed, if not unequalled, by those of

any other country of similar extent. Among the most remarkable on the northern shores may be mentioned, Pictou Harbour, which is as famous for its beauty as for its extent; Wallace Bay, navigable for vessels of the largest size, more than 6 miles; Pugwash Bay, in which ships of the first class can anchor within 20 yards of the shore; and St. George's Bay. On the S. and S. E. the noble harbour of Halifax stands pre-eminent. It is situated nearly midway between the eastern and western extremities of the peninsula, and its favourable position, easy entrance, accessibility at all seasons (its navigation being very rarely impeded by ice, as that of Quebec is annually), and capacity of affording safe anchorage for a thousand ships, have rendered it our chief naval station in North America. Shelburne Harbour is exceedingly capacious, and perfectly secure. Margaret's Bay is 12 miles in depth, and from 2 miles at its entrance to 6 in width; Mahone Bay, in Lunenburg County, is equally secure and extensive. Liverpool Harbour affords good anchorage; County Harbour is navigable for the largest ships for 10 miles from its entrance; Canso forms an excellent harbour, and Chedabucto Bay, 25 miles in length and 15 in breadth, is navigable throughout for the largest ships, and in its several smaller harbours affords safe anchorage. Between Halifax and Cape Canso are 12 ports, capable of receiving ships of the line, and there are 14 others of sufficient depth for merchantmen. The principal harbours on the northern shores in the Bay of Fundy are St. Mary's Bay, the beautiful Basin of Annapolis, which is described by Sir John Harvey as a noble estuary sheltered by mountain ranges, opening to the Bay of Fundy through a narrow gorge, navigable by large vessels, and accessible at all seasons of the year. Although this part of the country is comparatively but recently settled, the shores of this basin, for an extent of 30 miles, are highly cultivated, and present many traits of natural beauty and advanced civilization, of which the people are justly proud. Mines Basin, a continuation of the Bay of Fundy, whose tides of 60 feet in height rush through the strait between Cape Blomedon and Parraborough, and then expand over a broad basin, which washes the shores of four of the most fertile of the inland counties, receives into its bosom 19 rivers, and having a powerful ebb and flow, affords singular facilities for navigation. Chignecto Channel

and Cumberland Basin likewise form harbours of less importance.

The governor of Nova Scotia, in his report to Earl Grey in 1848, rightly remarks, that these harbours were obviously never intended by Providence solely for the use of the inhabitants of Nova Scotia, who are already becoming to a large extent the carriers to Canada of tropical and foreign productions, and it is confidently anticipated that these fine havens will become entrepôts for the extensive adjacent inland regions.

Geology.—Nova Scotia is marked by four geological divisions, which reach nearly across from S.W. to N.E., and run in a longitudinal direction with the greatest diameter of the country. The S. side of Nova Scotia, bordering on the Atlantic, and forming a narrow strip from Cape Sable to Cape Canso, is composed principally of granite, gneiss, and mica slate. The second division, which is three to four times the breadth of the first, and extends from Cape St. Mary to Chedabucto Bay, is composed of slate, greywacke, and greywacke slate. The third is a trap district, and forms a narrow slip from Briar Island to Mines Basin, including the whole of the North Mountains, and the islands, &c., on the Nova Scotia shore of the Bay of Fundy. The fourth is a red sandstone district, and extends from the Gut of Canso, along the Northumberland Straits. The different formations in Nova Scotia correspond with those of the United States. In both countries they extend from N.E. to S.W., nearly parallel to the Atlantic coast, having the transition and secondary rocks placed to the northward and westward of the primary formations. The geological divisions of Nova Scotia, as above laid down by Dr. Gesner in his valuable work, are subject to various irregularities and deviations; but a section of the strata, extending from Halifax across the province to Cumberland Basin, would expose a greater variety of rocks and minerals placed in regular order than has yet been discovered in any country of similar magnitude. The fossil remains found in the mountain-limestone, transition-slate, &c., are extremely curious. The palm tree, the bamboo, and the cactus, have been dug from the rocks and coal-seams, indicating that Nova Scotia at one time enjoyed a tropical climate.

The order of succession of the different strata of rocks in Nova Scotia is thus given by G. R. Young:—

Nature of Rocks and Soils.	Where found
Alluvial: A vegetable soil. Gravel, sand, and clay, containing the bones of animals now existing.	Everywhere. Valley of Annapolis and King's.
Diluvial: Beds of gravel and rounded pebbles, containing bones of animals now existing (diluv. detritus).	The surface of the red sandstone district generally.
Tertiary: Thin beds of limestone and marl, containing ammonites and other shells. Beds of clay, limestone, and marl, containing the remains of land and marine plants and animals.	Gay's river, and some parts of Cumberland. Rawdon, Douglas, and some parts of Colchester.
Oolitic: Brown sand. Slaty limestone, with shells. Marly clay Limestone with shells. Hard clay Compact limestone and Oolite.	Shubenacadie river. Windsor. Economoy. Onslow, Pictou, Cumberland, Parrsborough. Londonderry, Windsor Nepean.
Trap: Trap rocks. Greenstone, amygdaloid, and toadstone, containing gems and neolites.	The North Mountains, capes, and islands near Parrsborough.
Sandstone, new red: Sandstone of a bright red colour, containing beds of gypsum, and sometimes rock salt.	Windsor, Rawdon, Douglas, Pictou, Cumberland.
Coal group.—Secondary rocks: Limestones, containing magnesia. Coal measures, consisting of sandstone, coal, shale, iron-stones and limestone, in alternations often repeated, containing the remains of several classes of tropical plants, marine, and fluviatile shells. Millstone grit.	Shubenacadie, Cumberland. Pomket, Pictou, Onslow Cumberland. Pictou, Cumberland.
O. red old M. sandst. limest.: Beds of limestone, slate, clay, and sandstone. Dark red sandstone, with beds of pebbles.	Onslow, Pictou, Horton. Horton, Falmouth, Pictou.
Primary transition: Slate, greywacke slate, and quartz rock, sometimes alternating with transition limestone, containing marine organic remains. Mica slate. Gneiss. Granite of several varieties.	Chedabucto Bay, Halifax, Windsor Road, Lunenburg, Yarmouth, forming a belt running lengthwise the province, and occupying a large tract of country. Cape Canso, Halifax, Margaret's Bay, Lunenburg, Shelburne, forming the south coast of the province.

Grey granite prevails along the shore; trap-rocks, sometimes interstratified with clay-slate, protrude in various places in immense parallel ridges above the surface,

and frequently in piles of loose masses heaped confusedly together, traversed frequently by veins of quartz. Near Liverpool, says Dr. Gesner, the whole face of the country is covered with white granite masses; some of large and regular dimensions, resembling, at a distance, huts and other rude buildings; in some places the resemblance is so perfect, that they might be mistaken for a deserted village. Within four miles of Halifax is a granite rock, seventy-five feet in circumference, weighing upwards of one hundred and fifty tons, poised so evenly on a flinty base of twelve inches, that the strength of one hand suffices to put it in motion. Several extensive and beautiful grottos are to be found in different parts of the coast; one at Pictou is 100 feet long and 6 feet wide, with beautiful stalactites suspended from the roof; and a cavern at the Bay of Fundy, with a narrow entrance towards the sea, contains magnificent halls, apparently adorned with brilliant gems. In the old red sandstone near the town of Lunenburg, cavities, called "ovens," have been made by the sea; into these the waves rush with great violence, and the air being confined bursts out, carrying the spray before it with a noise and appearance like the spouting of an enormous whale. These "ovens" are supposed by some Americans to be the nests of the "sea-serpents" seen near Boston. Clay-slate is found in the eastern section of the colony; it is generally of a very fine quality, and used as building stone at Halifax. Greywacke, and greywacke-slate, in which are found beds of limestone and numerous species of specular iron ore, extend along both shores of Chedabucto Bay. The grindstones so much esteemed in the United States, and known as "Nova Scotia blue grits," are obtained from a stratum of sandstone, which is found between the coal and limestone; they afford a valuable branch of trade to the colony. Connected with carboniferous limestone are the valuable coal-fields of Nova Scotia, which, together with those of Cape Breton (now working), afford sufficient of this important mineral to supply the whole continent of America.

Major Robinson, of the Royal Engineers, in his able report, dated Halifax, 31st August, 1848, on the proposed line of railway from Halifax, through New Brunswick to Quebec, says that indications of coal are met with in abundance from the banks of Gay's River (twenty miles from Halifax) up to

the Restigouche River, and along the shores of the Bay of Chaleurs. The greatest and most valuable coal-field is that on the S. side of the harbour of Pictou, in Nova Scotia. The coal-field is stated to be about 100 square miles in extent—the seam varying in thickness from one to *thirty-six* feet. The coal is bituminous, and of good quality. Mines of it are extensively worked, and large exports from them are made to the United States. The Cumberland coal district is inferior in importance only to that of Pictou: it is supposed to extend from the Macon River, W. of Amherst, over to Tatmagouche, in the Straits of Northumberland. Some mines of it have been recently opened, and promise to be very productive.

Varieties of iron, copper, and lead ores have been met with; marble, alabaster, and porphyry abound, and the vast internal wealth of this portion of the British dominions will probably render it at no distant day the great mining district of the "New World."

Soil.—The arable surface is of various quality; there are extensive alluvial tracts producing as rich crops as any land in England; some of the uplands are sandy and poor, and on the S. coast it is so rocky as to be extremely difficult of cultivation, but when the stones are removed excellent crops are obtained. The heads of rivers and the bends of bays on the N. coast afford many fertile tracts. The granite disappears altogether, except at one or two places, at an average distance of 20 miles from the sea; slate forming the basis of the upland in the immediate rear, particularly in the centre of the province. Beyond this is the region of fertility—the soil being excellent, and stone (except quarries of grindstone and freestone in the counties of Pictou and Cumberland), rarely to be seen. There are three descriptions of land known in the husbandry of the province—upland, intervalle, and marsh.

The upland, in the counties of Inverness, Sydney, Pictou, Colchester, Cumberland, Hants, King's, Annapolis, and Digby, is generally fertile and free from stones. Sir John Harvey says:—

"Along the banks of many rivers, draining these extensive tracts, are found the intervalles, being narrow strips of light alluvial soil, above the head of the tide, and skirting the streams, until near their headwaters the mountains close in and make the descent too rapid to admit of deposits being formed. These intervalles are not more fertile than good upland, but are generally preferred: some of them, overflowed by the freshets, which bring down rich particles of soil

from higher elevations, will produce hay without manure; others, secure from flowage, and requiring no expense to dyke them from the sea, make excellent tillage land, easily worked, from their presenting level surfaces and a light yet fertile soil. Such of these intervalles as are cultivated bear grain and green crops well, perhaps with less manure than upland usually requires, but they do not retain it so tenaciously, and, besides, are earlier struck with frost.

"The dyked marshes of Nova Scotia, formed along the banks of all the rivers flowing into the Bay of Fundy and Basin of Mines, are the real wealth of the province, and redeem her from the lower level, which, but for them, she must have occupied as an agricultural country. I have said that the tides of the Bay of Fundy rise and fall about 60 feet. The tide-wave, pressed on by the mass of waters in the rear, rushes with resistless velocity up the beds of the streams, meeting and controlling the waters descending towards the basin, and overflowing with a rich deposit the flat lands, which extend on either side. The receding tide leaves these covered with rich mud, successive layers of which, deposited in the lapse of years, and gradually overgrown with wild grasses (which, as they rise, intercept and bind together fresh particles of soil), form the marsh lands of Nova Scotia, which have been cropped without manure for 150 years. The cost of protecting these lands is not very heavy compared with their intrinsic value, which is hardly yet sufficiently estimated by those who own them; but their comparative worth may be judged by the fact, that, while the best upland in Nova Scotia, in favourable situations, except on the peninsula of Halifax, rarely sells higher than £10 an acre, from £20 to £50 is perhaps the average price of dyke, while woodland or pasturage, on the hill sides, but a few miles in the rear, will scarcely command £1."

There is an extensive disintegration of rocks in Nova Scotia, and the decomposition of granite, which is composed of quartz, feldspar, and mica, produces a soil, which, although scanty, is good and productive. Granite, especially the soft or porcelain description, when presenting a naked surface to the atmosphere, speedily decays; Sir Humphry Davy has shewn that the *feldspar* which constitutes one of its ingredients, yields lime and potash; the *mica*, lime and magnesia; these imbibe from the atmosphere carbonic acid; the oxyde of iron, which constitutes one of the ingredients of granite, tends to unite with more oxygen, and the moisture supplied by rain serves to break the cohesion of the structure and prepare for rapid disunion. *Feldspar*, which is the cement of granite, first yields and forms clay; *mica* next gives way and forms sand, and *quartz*, which takes the longest time in decomposing and is a pure siliceous earth, forms gravel. The old red sandstone in different parts of Nova Scotia, has contributed much to the production of soil by its easy decomposition; but it is a poor and hungry soil, and has but a scanty covering

of vegetation, unless improved by artificial means. In Nova Scotia the *upland* consists partly of siliceous or sandy soils, called "barrens;" partly of some pretty large tracts of clay, diversified both as to texture and colour, but chiefly of loam—the best and most valuable of all uplands, because compounded of original earths, by whose union the purposes of vegetation are most effectually promoted. These loams are distributed in rich profusion all over the province, and yield abundantly whatever kind of corn is sown upon them.

Of clay upland there is a great variety, and it is met with on the different rivers that empty themselves into Pictou harbour, in the neighbourhood of the Shubenacadie, and largely between Liverpool and Shelburne. The term "*intervale*" in Nova Scotia is applied to fertile levels along the banks of rivers, formed by the gradual deposition of their waters during successive ages. The *intervalles* are composed therefore of successive coats of fine particles of clay, sand, and lime, which the water had held in suspension, and which had been washed from the higher lands by rains or melting snows. They are of alluvial origin, and all the primitive earths enter into their composition; one turbid torrent brings clay, another sand, a third passing a limestone district contributes a valuable calcareous earth. Where any of these ingredients predominate, the *intervale* is not so fertile; it is their equable mixture which gives the soil its great fertility. In the N. W. districts the best land is found: towards the Bay of Fundy the soil is rich and free from stones. A great extent of dyke, or marsh land, has been drained, and some of it has yielded for more than half a century an annual produce of three tons of hay per acre. There are 70,000 acres in one body of this dyked land at the head of the Bay of Fundy.

The agricultural operations of the province, thanks to the excellent "*Letters of Agricola*" (J. Young, Esq.), are conducted with much skill and success.

Climate and Diseases.—The climate of Nova Scotia, like other parts of the North American continent, is remarkable for great and sudden alternations of temperature; the thermometer has been known to exhibit a difference of 52° in 24 hours. The atmosphere is exceedingly moist; the showers heavier and more frequent than in Britain; fogs are common along the sea coast, particularly in May and June, but they seldom

extend any distance into the interior. Although the winter is much more severe than that of Great Britain, yet the cold is not by several degrees so intense, nor the heat of summer so great as in that part of the American continent further to the westward. The thermometer is seldom lower than 6° or 8° below zero in winter, or above 88° in summer.

As the country is cleared, the climate becomes milder; the following Meteorological Register is for Halifax:—

	Ther. Fahr.			Weather	Wind.
	Max.	Med.	Min.		
January .	42	20	2	Clear, rain, snow	N.S.W.
February .	40	18	10	Ditto, ditto, cloudy	N.W. and variable
March . .	52	25	6	Ditto, cloudy, rain	N.W. and S.W.
April . .	54	30	8	Ditto, rain and cloudy	Westerly.
May . . .	60	40	20	Ditto, little rain	N. and ditto.
June . . .	68	50	30	Ditto	W. and Northerly.
July . . .	80	63	40	Ditto, ditto and fog	W.N. and S.
August . .	90	70	55	Ditto, do. do. and hazy	W. and Southerly.
September	79	51	48	Ditto, ditto	N.W. and S.
October .	68	51	48	Ditto	S.W.N. and N.W.
November	56	38	18	Ditto, rain and fog	W. and S.W.
December	46	25	7	Ditto, and snow	N.W. and N.E.

From December to the end of March the ground is generally covered with snow. There is scarcely any spring, but the autumn is pleasant, and of long duration. The prevailing winds are from the E. in spring, and from the S. or S.W. in summer and autumn, and from the N. or N.W. in winter, at which period a change to any other quarter is generally followed by a rapid rise in the thermometer, accompanied by much rain or snow. The statistical reports on the sickness, mortality, and invaliding among the troops of the British army, prepared from the records of the Army Medical Department and War Office returns, states, that although nearly one-third of the surface of the peninsula is under water, yet the inhabitants "enjoy a remarkable degree of health, and an almost total exemption from those intermittent and remittent fevers which affect the constitution in Canada." The air, indeed, is highly salubrious; 80 years of life being frequently attained in the full use of mental and bodily faculties. The climate of Cape Breton is much the same as that of Nova Scotia, but even more healthy; no epidemic disease, except small-pox, has been known for many years in the island, and both among the inhabitants and the troops sickness and mortality are exceedingly rare. In the adjacent island of

Prince Edward the winter is more severe than at Cape Breton or Nova Scotia; the thermometer frequently falls to 20 or 25° below zero, and the rivers and bays remain frozen to the end of April. At Fredericton, in New Brunswick, the climate is not liable during winter to such sudden vicissitudes as that of Nova Scotia; the frost is steadier, and the winter more severe and of longer duration; the summer heat is more intense; the thermometer ranges from 96 to 42° below zero. Fogs during May and June are common along the sea coasts, but they do not appear to have much effect on the salubrity of the air. In illustration of the health of these settlements the following return is given of the sickness and mortality among the troops in Nova Scotia and New Brunswick, for a period of 20 years, according to the medical returns of strength:—

Years.	Strength.	Admitted into Hospital.	Died.	Ratio per 1000.	
				Adm.	Died.
1817	3,245	2,499	65	770	20
1818	2,411	1,343	17	557	7
1819	2,070	1,595	36	771	17
1820	1,995	1,481	24	743	12
1821	2,034	1,828	16	899	8
1822	2,083	1,736	29	833	14
1823	1,987	1,444	24	727	12
1824	2,005	1,655	22	825	11
1825	2,196	2,418	29	1,101	13
1826	2,183	1,796	32	823	15
1827	2,212	1,724	34	779	15
1828	2,138	1,588	28	743	13
1829	2,286	2,062	28	902	12
1830	2,417	2,051	33	849	14
1831	2,463	2,182	53	886	22
1832	2,290	1,781	29	778	13
1833	1,892	1,376	32	727	17
1834	1,967	2,196	79	1,116	40
1835	2,146	1,681	18	783	8
1836	2,102	1,738	21	827	10
Total	44,120	36,174	649	—	—
Average	2,206	1,809	32	820	14.7

This table differs from the War Office returns, which give the total deaths, arising from all causes, at 829; making a difference in 20 years of 180. Of this number 17 committed suicide, 35 were drowned, 8 died suddenly, 7 by accidents, 8 by excessive drinking, 1 frozen to death, 1 shot attempting to desert; some died at an outpost under charge of private medical practitioners; and some belonged to the Artillery, who make no returns to the War Office. The medical officers' statements above show an average annual mortality of 14.7 per 1,000;

the War Office returns 18 per 1,000 annually, which is more than that of the dragoons and dragoon-guards in the United Kingdom, whose ratio of mortality is about 14½ per 1,000 annually, and the average of sickness 109 per 1,000 more than that of the troops in Nova Scotia and New Brunswick. In Canada the medical officers' returns for 20 years show the total strength referred to in returns 61,066; the admissions into hospital of that strength, 66,957; the deaths, 982; the average annual admissions into hospital were therefore 3,348; the average annual deaths, 49; the deaths per 1,000, 16·1. The cases of sickness in Canada are 168 per 1,000 more than the dragoon-guards and dragoons serving at home; and the deaths of 16·1 per 1,000 is a medium between the ratio in infantry depôts and cavalry corps serving at home. The mortality shewn in the War Office returns for the same period is 1,286, making a difference of 304; of this number 122 were drowned (chiefly in attempting to desert into the United States), 13 committed suicide, 10 died of excessive drinking, 10 of apoplexy, 3 found dead, 2 killed by lightning, 2 shot dead, 1 murdered, 3 executed, 4 died suddenly,—these and other casualties make the mortality in Canada 20 per 1,000 annually. The moiety of deaths in Canada were from fever; in Nova Scotia and New Brunswick from diseases of the lungs. The diseases and deaths among the troops in Nova Scotia and New Brunswick, are thus shown:—

DISEASES (The admissions & deaths in the United Kingdom refer to the dragoons and dragoon-guards.)	ADMISSIONS.		DEATHS.	
	Ann. ratio per 1000 of Mean Strength.	Ann. ratio per 1000 of Mean Strength.	Ann. ratio per 1000 of Mean Strength.	Ann. ratio per 1000 of Mean Strength.
	Nova Scotia and New Brunswick.	United Kingdom. (Dragoons.)	Nova Scotia and New Brunswick.	United Kingdom.
Fevers	69	75	1·6	1·4
Eruptive Fevers	2	3	..	·1
Diseases of the Lungs	125	148	7·1	7·7
" Liver	9	8	·2	·4
" Stomach and Bowels	94	94	1·5	·8
Epidemic Cholera	5	4	1·4	1·2
Diseases of the Brain	11	6	1·3	·7
Dropsies	2	1	·5	·3
Rheumatic Affections	30	50		
Veneral	83	181		
Abscesses and Ulcers	105	133		
Wounds and Injuries	148	126	1·1	1·4
" Punished	31	8		
Diseases of the Eyes	51	19		
" Skin	23	29		
All other Diseases	32	44		
Total	820	920	14·7	14

Thus, although the climates and localities are, in many respects, dissimilar, the diseases and mortality are alike. It should be remarked, however, that the dragoons and dragoon-guards are picked men, and not subject to the exposure and hardships devolving on troops of the line in the Colonies.

Every physiological, terrestrial, and meteorological fact, in any manner connected with the mysterious disease termed cholera, is so valuable, in order that, by better understanding it, every means may be taken which can be reasonably hoped to conduce, under Providence, to its prevention, mitigation, and cure, that I am induced, to give the following remarkable statement, furnished to the War Office, relative to the appearance and progress of this extraordinary malady among the troops in British America; viz., at Nova Scotia, New Brunswick, and in Eastern and Western Canada.

"The troops in this command (Nova Scotia and New Brunswick) escaped this disease in 1832, when it raged with great severity in Canada, but in July, 1834, it broke out among those at Halifax under the following circumstances. On the 20th of that month a vessel from Quebec, where the cholera was then prevalent, entered the harbour of Halifax. During the voyage the crew had suffered severely from bowel complaints, and one of them was admitted into the poor-house labouring under symptoms of cholera, of which he died. About a week afterwards, another fatal case occurred in a person occupying the same ward, and by the 7th August the disease began to be very general among the inmates of the establishment. The first cases were observed in the town about the 10th of August, from which period till the 24th the epidemic made rapid progress, and continued with various degrees of intensity till the end of September. The extent of its ravages cannot be accurately ascertained, but it is supposed that throughout the town and suburbs about 600 died. The number admitted into the civil hospitals was 1,020, and the deaths 382. The infirm, the drunken, and the dissipated were its principal victims, though to this there were many exceptions.

"Among the military, two cases of simple cholera had been noticed in the 96th regiment, on the 24th and 31st July, but it was not till the 8th of August that the first fatal case occurred. After that period it spread throughout the garrison; the Rifle Brigade suffered most, indeed to such extent, that 18 deaths took place between the 21st and 25th of August. The corps was, in consequence, sent to Sackville, about 8 miles from Halifax, after which only four new cases occurred. The success of this experiment led to the same measure being adopted with the 96th and 83rd regiments, who were removed to an encampment in the vicinity of the town, with the like good effect; the disease ceased both among the civilians and military about the end of September, though a few isolated cases continued to present themselves for some weeks after.

"During the whole of this period bowel complaints of various kinds were exceedingly common, even

among those who escaped the graver forms of the disease.

"Though the circumstances under which the disease first appeared were such as to favour the idea of contagion, yet nothing occurred in the course of its progress to strengthen that supposition; and neither the medical officers, nor those in immediate attendance on the sick, suffered in a greater proportion than persons not so exposed.

"Of 293 women attached to the different corps, 37 were attacked and 16 died, being almost exactly the same proportion as among the soldiers. Children were remarkably exempt, for of 560 in the garrison only 16 were attacked, and 6 died. The officers also suffered but little; out of a strength of 60 only 4 were attacked, all of whom recovered.

"The admissions into hospital were 210, the deaths 59. Proportions of deaths to admissions 1 in 3 nearly.

"The following Table, compiled from the Age and Service Returns furnished annually to the War Office, shows that the mortality on this occasion fell very heavily on soldiers at an advanced period of life:—

Age	Strength.	Total Deaths by Epidemic Cholera.	Ratio of Deaths per 1000 at each Age by Epidemic Cholera.
Under 18 . . .	18	—	—
18 to 25 . . .	502	1	2.
25 " 33 . . .	829	30	36.2
33 " 40 . . .	158	14	88.6
40 " 50 . . .	37	4	108.
Total . .	1,544	49	34.7

"This Table only includes a part of the deaths, as those which occurred among the Ordnance cannot be traced.

"We find it stated, that prior to the appearance of cholera there was more easterly wind than usual, and that the progress of the disease was greater during and after a long continuance of rain than in dry weather; but the meteorological observations are not sufficiently detailed to warrant the accuracy of that assertion. The epidemic does not seem to have extended beyond the limits of Halifax, at least the troops were exempt, and we can find no record of it having prevailed in any other quarter among the civil population.

"The disease prevailed in Canada in 1832 and 1834; in the former of these years cases of it were first noticed at Quebec, on the 8th of June, among a party of emigrants who landed there on their way to Montreal, in consequence of the steam-boat in which they had embarked being over-crowded. On the following day a person belonging to the same party, but who had preceded by the vessel to Montreal, was attacked shortly after his arrival there, and within a few days the disease became general in both towns, breaking out almost simultaneously at different and opposite parts with extreme virulence, even when no communication with strangers or emigrants could be traced; it chiefly affected residents in crowded or ill-ventilated buildings, or low and marshy situations, where whole families were in several instances cut off by it.

"By the 17th or 18th of June the disease had attained its greatest prevalence and severity, and continued with little abatement during the rest of that

month; but towards the beginning of July the cases became of a milder nature; it afterwards raged, however, at intervals, with increased virulence for a few days, and isolated cases continued to make their appearance till the month of October. The disease then ceased, after having destroyed in Quebec upwards of 2,200 out of a population of 30,000, including passing emigrants, and 3,000 in Montreal, out of a population of nearly the same extent; as the greater proportion of these perished within a fortnight after the disease appeared, the mortality during that period must have been most appalling. In Quebec it broke out among the troops a few days later than among the inhabitants, but did not affect them to quite so great an extent; out of about 1,100 quartered at Quebec 25 died, besides two or three at some of the small outposts. The 32nd Foot, which was cut off from communication with the inhabitants by being quartered in the citadel, escaped for 66 days, but then suffered as much as the rest of the troops; for of 17 attacked 11 died, and the disease was so rapid in its progress, that the average duration of the fatal cases did not exceed 16½ hours.

"In Montreal, cholera appeared among the troops two days after it broke out in the town, and raged with still greater severity than at Quebec, for out of a force which did not exceed 550 men 39 were cut off in a few days.

"With the view of arresting the alarming progress of this pestilence, the military at Montreal were, about the 20th of June, removed to an encampment on the island of St. Helen's, and all communication with the town cut off; they remained till the end of October, during which period only one case occurred among them. A detachment of 70 men, however, who had been removed to the barrack of La Prairie, on the opposite side of the river, suffered extremely; for, of 10 soldiers attacked, 8 died; the remainder were then transferred to St. Helen's, after which no fatal case, and only two or three slight attacks, occurred among them.

"On this occasion the troops at Isle aux Noix, Sorel, and the other stations in Lower Canada, escaped the disease, but within eight days after its appearance at Montreal it broke out at Kingston in the upper province, and gradually extended to Toronto, and Fort George, where it proved fatal in nearly the same proportions as in the lower province, particularly at Toronto. Though the inhabitants at By Town suffered very much, the cases among the military were comparatively few and slight, and at Amherstberg and Penetanguishene they entirely escaped. The loss of the troops at those stations in the upper province where it prevailed was,—

	Strength.	Died.
At Kingston and Fort Henry . . .	577	8
Toronto	317	10
Fort George	59	2

"As it was later in its appearance, so it was, in a corresponding degree, of longer continuance in the upper province, where cases occurred till the commencement of winter. Owing to the scattered state of the population, the precise extent of the mortality cannot be exactly ascertained; but at Toronto, about an eighth part was attacked, and of these, one-half died. At By Town, 49 deaths took place out of a population of 1,000, and in some of the smaller villages the mortality was even greater.

"During 1833 no cases of cholera were observed; in May, 1834, a few were said to have occurred at Quebec immediately after the opening of the ports,

but it was not till the 7th of July that the presence of the disease in that town was so far ascertained as to be made the subject of official announcement. On the 11th it was reported also at Montreal, but in both of these towns, and indeed generally throughout the province, its progress was by no means so rapid or so alarming as on the previous occasion. By the middle of August it was on the decline throughout Lower Canada, but did not entirely disappear till November. The mortality was not so great as in 1832, for only 930 deaths are recorded to have taken place from it in Quebec, and 882 in Montreal.

"Though one case is said to have occurred in the end of June, it was not till the 14th of July that the epidemic began to prevail among the military in Quebec. Between that date and the 4th of August, several were attacked in the town barrack; but, as on the former occasion, those in the citadel escaped till the disease was on the decline among the inhabitants; the first case among them occurred on the 18th of August, and for a week thereafter they suffered very much, though not to such an extent as the others. In all, 16 deaths took place among the troops in the town and citadel of Quebec, besides 3 at the quarantine station of Gros Isle, where there was a small detachment.

"At Montreal the disease appeared among the military the day after it was observed among the inhabitants, and by the 22nd of July several cases and four deaths had taken place; the troops were then removed to the Island of St. Helen's, as on the former occasion, and with like good effect, for only two cases occurred afterwards, neither of which proved fatal, though of nine cases left sick in the hospital at Montreal three died. Of the troops at Isle au Noix, and the other small military posts in the Lower Province, none were attacked, but in some of the adjacent villages it proved very fatal; at Three Rivers, for instance, 63 deaths took place out of a population of 300.

"Following up the course of the St. Lawrence the cholera reached Kingston on the 26th July, and prevailed among the inhabitants quite as much as in 1832. The Artillery, though in an elevated and what was supposed a healthy quarter, lost five men in the course of a few days. The troops of the line, who, being in a low swampy situation, were more likely to suffer, lost only one man, but their barracks admitted of a more complete separation from the inhabitants,

to which this exemption was attributed, and on the Artillery being removed to an encampment at Fort Henry the disease disappeared. From Kingston it extended to Toronto on the 30th of June, and committed great havoc among the inhabitants, particularly the lower orders, but the troops escaped with three cases of simple cholera, none of which proved fatal.

"The disease prevailed to a considerable extent both at Fort George and Amherstberg among the inhabitants, but did not extend to the troops, who only suffered from a general tendency to bowel complaints during the time it prevailed in the vicinity. At the remote station of Penetanguishene no cases occurred."

"The proportion of deaths to the number attacked was very nearly the same in both years. In all situations and under all modes of treatment, about 1 in 2 died of the cases in the civil, and 1 in 3 of those in the military hospitals; but from the strict surveillance exercised over the troops, nearly half of the cases among them were noticed in the premonitory stage, and consequently could be treated with a greater prospect of success than those in the civil hospitals, where the great majority of patients were far advanced in the disease before they applied for medical aid. The admissions into hospital were 356; deaths, 127; proportion of deaths to admissions 1 in 3.

"One of the most extraordinary features of this epidemic is, that the proportion of deaths to recoveries has been very nearly alike in all the Military Commands of which the medical records have been investigated, for instance:—

Military Commands.	Attacks.	Deaths.	Prop. of Deaths to Attacks.
Among Cavalry in the United Kingdom, 1832, 1833, and 1834 .	171	54	10 in 32
" Troops in Gibraltar, 1834 .	459	131	10 " 35
" " Nova Scotia, &c. 1834 .	210	59	10 " 35
" " Canada, 1832 .	259	94	10 " 28
" " Canada, 1834 .	97	33	10 " 29
" Black Troops at Honduras, 1836	62	20	10 " 31

"Thus, under all the modes of treatment which may have been adopted on these different occasions,

with primeval forests, except for a short distance around the post.

"Though this station is little more than one degree N. of Toronto, there is a vast difference in the climate; the winters are as severe and as long as those in Lower Canada; snow falls about the middle of November, and continues till the beginning of May, and, in some instances, the whole lake is frozen till the end of that month. The summers are however much cooler, and more agreeable than in either of the provinces. Notwithstanding the severity of this climate, the troops have been healthy to an unprecedented degree; no death has taken place, except from accidents, since 1828, when the station was first occupied. Fevers are almost entirely unknown; and in 1836, out of an average force of 42 men, only 4 cases of disease occurred which could fairly be attributed to climate; yet so sudden are the changes of temperature, that the thermometer has been known to fall from 40 deg. above to 15 deg. below zero, between midnight and sunrise."

* Penetanguishene, to the N. of Georgian Bay, a branch of Lake Huron, is distant about 80 miles N. W. from Toronto, where a subaltern, with 30 or 40 men, is generally quartered. The barrack, a substantial stone building affording excellent accommodation, stands at the base of a long sandy ridge of ground from 200 to 300 feet in height, forming, by its projection into the bay, one extremity of an extensive harbour. There is also a small wooden hospital on the rising ground, about 400 yards in rear of the barrack. At the head of this bay, as well as for several miles to the S. E., the ground is low and swampy, but as the post is well sheltered in that direction by the rise of the hill on which it is built, and the wind generally blows down the lake, the exhalations are likely to be carried beyond the garrison.

"The general character of the country in this district is undulating and hilly, but there are no mountains of any magnitude in the vicinity, though several are to be seen in the distance: the soil is still covered

the proportion of deaths to recoveries has not varied above one-fourth, showing that the remedial measures hitherto employed can have had little if any effect in counteracting the fatal character of the disease.

"In both these years, when this epidemic prevailed, the native Indians suffered from it to the same extent as the white population. At three settlements from which Returns were received, about a twelfth part of the population died in 1832, and about half that proportion when it again prevailed in 1834. Although their principal remedy consisted in swallowing large quantities of charcoal mixed with lard, almost exactly the same proportion recovered as among the white inhabitants of the towns, who possessed every advantage which the aid of medical science could suggest.

"In tracing the course of various epidemics of yellow fever among our troops in other colonies, we have frequently noticed that all ranks were affected in nearly an equal degree; the reverse was the case, however, with cholera, particularly in Canada, for not a single officer died, and only four were attacked during the first, and three during the second epidemic. The same peculiarity was observed during

the prevalence of this disease in Nova Scotia, in 1834; and in Gibraltar there were but two admissions and one death among the officers, though there were 459 admissions and 131 deaths among the troops. This leads to the inference that though little can be done to ameliorate the character of the disease when allowed to arrive at an advanced stage, yet that a generous diet, regular habits, and the degree of attention which persons in the higher ranks of life are likely to pay to its premonitory stages, have a powerful effect in diminishing their liability to its influence.

"The soldiers' wives suffered to almost precisely the same extent as the troops, but there was a marked exemption of their children from the severer forms of the disease, only seven cases and four deaths having occurred among them on each occasion, though their numbers were between 700 and 800; a very large proportion, however, suffered from diarrhoea during the prevalence of the epidemic, and many were cut off by it.

"The following Table, compiled from the Age and Service Returns, furnished annually to the War Office, shows the influence of age on mortality by this disease among the troops:—

Age	Strength.		Deaths by Epidemic Cholera.		Total Strength for both years.	Total Deaths by Epidemic Cholera, in both years.	Ratio of Deaths at each Age by Epidemic Cholera.
	1832.	1834.	1832.	1834.			
Under 18 . . .	18	12	—	—	30	—	—
18 to 25 . . .	1,172	695	23	5	1,867	29	15.5
25 to 33 . . .	1,070	1,145	39	12	2,215	51	23
33 to 40 . . .	282	297	17	4	579	21	36.3
40 to 50 . . .	38	47	3	3	85	6	70.6
Total . . .	2,580	2,196	82	25	4,776	107	22.4

"As the requisite Returns are not furnished by the Artillery, this Table refers to the deaths which took place among the troops of the line only; but combined with similar results obtained in regard to those in Nova Scotia, it is sufficient to establish that the fatal tendency of cholera increased rapidly with the advance of age.

"In tracing the rise and progress of this disease, nothing is more remarkable than the regularity with which, on both occasions, it advanced along the principal channels by which the tide of emigration and of commerce flowed through the country; take, for instance, its progress along the line of the St. Lawrence and the lakes.

Progress of the Disease.	Date of Appearance of the Disease	
	1832.	1834.
Quebec . . .	8th June	7th July.
3 Rivers, between Montreal and Quebec . . .	Escaped	9th "
Montreal, 180 miles above Quebec . . .	10th June	11th "
Kingston, 190 miles beyond Montreal . . .	16th "	26th "
Toronto, 184 miles beyond Kingston . . .	28th "	30th "
Port George, 40 miles from Toronto . . .	14th July	13th Aug.
Detroit and Amherstburg, at the extremity of Lake Erie . . .	6th "	End of Aug.

"Here, with the single exception of Port George, at which it appeared a few days later in 1832 than might have been expected from its geographical posi-

tion, this singular disease may be said to have travelled with post-like regularity.

"Along the banks of the Ottawa, another of the principal channels of emigration into Canada, it pursued the same steady course, as well as up the Richelieu, and along Lake Champlain through the United States to New York, a route which is also frequently taken by emigrants on their arrival in Quebec. These circumstances, combined with the fact of several persons having died from the disease on their passage from Ireland, in each of the years when it appeared, led to the belief of its having been imported, and subsequently communicated by contagion; various precautionary measures were in consequence adopted to prevent its propagation, and strict quarantine regulations were enforced, both as regarded the troops and inhabitants; but though in some instances these were apparently effectual, in others they proved of little avail, and the contagious nature of the disease was subsequently rendered extremely questionable from the circumstance, that neither the physicians nor those in constant attendance on the sick, exhibited any peculiar liability to it.

"Of course it is impossible, in a limited Report of this nature, to enter fully on all the facts and arguments bearing on the important and much-disputed topic of contagion; we can only say that all which has been adduced on either side seems to fall far short of absolute proof, and even those who have had the best opportunities of forming accurate opinions, by watching the progress of this disease, are forced to admit that its origin is still involved in

mystery, or at least, that the contrariety of results can only be reconciled by supposing that under some circumstances it may be contagious, while in others it may be the reverse.

"Prior to its appearance in 1832, the winter had been extremely severe, the spring cold and backward, and the average temperature of summer considerably below its usual standard. Easterly winds had also prevailed continuously for 27 days before the disease broke out; but this is by no means uncommon in spring, though in that year they were more frequent than usual, as will be seen by the following statement:—

Years.	Days of Easterly Winds in April, May, and June.	Days of Easterly Winds throughout the year.
1832	49	121
1833	38	111
1834	36	120

"Except in regard to the slight difference in the prevalence of easterly winds, the season of 1833 was almost exactly the same as that of 1832, and yet there was no cholera; whereas that of 1834 was the

very reverse of either. With the exception of one month the winter was open, the spring mild, the easterly winds preceding the breaking out of the cholera more rare, and the heat of summer greater than for many years previous.

"Most accurate and extensive meteorological observations were made daily during the continuance of the disease, but neither variations of temperature, fluctuations of the barometer, change of wind, nor the prevalence nor absence of moisture, seemed to affect it in the slightest degree; on this point there was no difference of opinion, whatever may have existed on others connected with its origin and progress."

In July, 1849, the malady again appeared in British North America, and pursued nearly the same course it did in 1834.

Some further remarks on the influence of climate on age, and the degree of sickness and mortality among the troops serving in British America, will be given when treating of Bermuda, which is included in several of the returns relating to Canada, Nova Scotia, and New Brunswick.

CHAPTER III.

POPULATION, COUNTIES, CHIEF TOWNS, LAND CULTIVATED, AGRICULTURAL PRODUCE AND LIVE STOCK OF EACH COUNTY; GOVERNMENT, LAWS, MILITARY DEFENCE; EDUCATION, THE PRESS, RELIGION, CRIME; FINANCES, REVENUE AND EXPENDITURE, TARIFF, COMMERCE, IMPORTS AND EXPORTS, STAPLE PRODUCTS AND MANUFACTURES, MINES, QUARRIES, AND FISHERIES; PRICES OF PROVISIONS, WAGES OF LABOUR, PROPERTY ANNUALLY CREATED, MOVABLE AND IMMOVABLE WEALTH, COINS AND BANK NOTE CIRCULATION, PROJECTED RAILROAD FROM HALIFAX TO QUEBEC.

WHEN first discovered by the Europeans, Nova Scotia, as well as other parts of America, was inhabited by Indians of a reddish-brown colour, with high cheek-bones, large lips and mouths, long black coarse hair, and fine, intelligent, penetrating eyes; the males being from 5 feet 8 inches to 6 feet in height, with broad shoulders and strong limbs. The two principal tribes, the Mic-macs and Richibuctoos, differing in features and in dialect, were equally savage in their mode of life and manners, but to some extent civilized and made nominal Christians, by the early French settlers, who trained the Indians to assist them in their contests with the English.

The wars between the rival nations for

the possession of Nova Scotia, the introduction of the small-pox, and, above all, the maddening effects of the unlimited use of spirituous liquors, have swept off nearly all the Indians from the face of the country of which they were once masters, and only a few hundreds, principally of the Mic-macs, are still to be found. Indolent in the extreme, except when roused by the stimulus of hunger or revenge, the Indian dreams away a monotonous existence—his only wants are food, raiment, and shelter of the simplest kind; and probably within a few years, the remnant of this species of the human race will have entirely passed away.

I have been unable to obtain accurate de-

tails of the early progress of population in the colony: in 1749, about 140 years after the settlement of the colony, the Acadians amounted to 18,000 in number; after the removal of these people from Nova Scotia in 1755, the British settlers were computed at only 5,000, but in 1764 the number of souls was stated at 13,000, including 2,600 Acadians, who had returned to the province. In 1772, the reported number was 19,120; but in 1781, in consequence of considerable emigration taking place from the colony,

the number was reduced to 12,000. Two years after, 20,000 loyalists arrived, and the number increased to 32,000; but by the subsequent separation of New Brunswick, Prince Edward's Isle, and Cape Breton into distinct governments, the population of Nova Scotia was of course diminished. In 1807 the inhabitants were estimated at 65,000 (exclusive of Cape Breton Island). A census was taken in 1817, another in 1827, and a third in 1837, the result of each being as follows:—

Counties in 1817.	Whites.		Free Blacks.		Total in 1817.	Total in 1827.	Increase in 10 yrs.
	Males.	Females.	Males.	Females.			
Halifax	15,181	13,929	391	350	29,851	46,528	—
Hants	3,587	2,956	82	60	6,685	8,627	1,942
Annapolis	4,861	4,461	171	228	9,721	14,661	4,940
King's	3,457	3,275	64	49	6,845	10,208	3,363
Shelburne	5,586	5,892	232	236	11,946	12,018	72
Queen's	1,421	1,410	139	128	3,098	4,225	127
Lunenburg	3,465	3,052	58	53	6,428	9,405	2,777
Sydney	3,531	3,100	246	214	7,091	12,760	5,669
Cumberland	1,641	1,348	29	30	3,048	5,446	2,398
Total	42,730	39,423	1,412	1,348	84,913	123,878	21,288

The foregoing is exclusive of king's troops, whose numbers amounted, in 1817, to 1,302; and also of Cape Breton Isle, which contained, in 1817, 14,000 inhabitants; and in 1827, 30,000.

It will be observed that the census of 1827 is differently arranged from that of

1817; the number of males, during the former period, was 72,971, and of females, 69,577; the annual births, 5,246; the deaths, 2,124; and the marriages, 1,073.

The aggregate of the census of 1827 shows the number of male and female servants, exclusive of masters, as follows:—

Population of Nova Scotia in 1827.

Counties and Districts in 1827.	Population.					Births.	Marriages.	Deaths.
	No. of males in the county exclusive of labourers or servants.	No. of females in ditto, exclusive of servants.	No. of labourers, or male servants.	No. of female servants in ditto.	Total No. of souls in the county.	No. of, in the county during the year.	No. of females married in the county during same period.	No. of, in county during same period, including labourers.
Halifax County:—								
Peninsula of Halifax	5,546	6,466	1,321	1,106	14,439	384	87	520
District of Halifax	4,898	4,614	689	345	10,437	370	105	157
" Colchester	3,606	3,597	315	185	7,703	334	38	77
" Pictou	6,704	6,291	408	296	13,949	501	70	115
Counties of—								
Hants	3,901	3,692	619	415	8,627	330	95	362
King's	4,756	4,654	537	261	10,208	339	71	115
Annapolis	7,152	6,917	339	253	14,661	435	65	100
Shelburne	6,133	5,885	273	288	12,018	635	129	124
Queen's	1,936	1,915	251	123	4,225	153	26	77
Lunenburg	4,531	4,288	315	271	9,405	331	78	123
Cumberland	2,568	2,415	285	148	5,416	242	46	49
Sydney	6,255	5,775	431	222	12,760	508	126	89
Total	57,986	56,609	5,783	3,913	123,848	4,563	945	1,908

The following table, derived from the "Blue Book" for 1847, gives the latest census that has been taken in Nova Scotia, and shows

the number and names of the counties into which it is divided :—

Abstract of Census of Nova Scotia in 1837, from "Blue Book" for 1847.

Counties.	Heads of Families.	Under 6 years.		Under 14 years.		Not Heads of Families. Over 14 years.		Total.
		Male.	Female.	Male.	Female.	Male.	Female.	
Halifax	4,323	2,991	2,918	2,871	2,774	3,694	8,999	28,570
Colchester	2,050	1,009	1,241	1,467	1,310	2,121	1,476	10,674
Pictou	3,199	2,418	2,333	2,295	1,979	6,030	3,361	21,615
Hants	1,809	1,277	1,233	1,256	1,921	1,591	3,041	11,399
King's	2,092	1,503	1,435	1,595	1,473	2,100	3,511	13,709
Annapolis	1,962	1,328	1,267	1,249	1,128	3,462	1,593	11,907
Yarmouth	1,471	1,106	1,062	1,094	972	1,067	2,420	9,192
Shelburne	1,069	720	670	768	710	1,305	909	6,151
Queen's	925	671	624	579	586	796	1,617	5,798
Lunenburg	1,925	1,409	1,239	1,498	1,374	1,454	3,156	12,055
Guysborough	1,191	912	842	886	839	930	1,847	7,447
Digby	1,411	1,056	1,008	1,065	926	1,193	2,530	9,189
Sydney	1,565	1,439	1,163	1,242	1,213	1,291	1,222	9,135
Cumberland	1,236	894	873	953	792	1,182	1,642	7,572
Cape Breton	2,255	1,762	1,643	1,686	1,405	3,538	1,792	14,111
Inverness	2,159	1,560	1,601	1,601	1,397	3,378	1,751	14,099
Richmond	1,219	894	888	899	816	916	1,571	7,203
Total	34,891	22,949	22,040	23,004	21,615	36,048	42,438	199,906

Note.—There is an apparent error of 652 in the return for Inverness, which there is no means of correcting until the census of 1851.

In the ecclesiastical returns for 1847, the population of several of the counties is estimated for that year; and, if correct, there has been a large increase of inhabitants since the census of 1837: thus Sydney contained, in 1837, population, 9,135; in 1847, 17,000; Colchester, 10,674 and 14,000; Pictou, 21,165 and 30,000; Guysborough, 7,447 and 10,000. The population of Nova Scotia was estimated in 1848 at 230,200, viz., City of Halifax, and county, 40,000; County Cumberland, 10,600; Colchester, 14,900; Pictou, 30,300; Sydney and Guysborough, 23,200; remaining counties, 111,260. The population of Cape Breton was estimated in 1848, at 49,600. It is now probably more than 50,000. The estimate of the population in Nova Scotia and Cape Breton for the year 1850, it is supposed will not be far short of 300,000.

The population of Nova Scotia is composed of various races, viz., French, English, Irish, Scotch, and Anglo-Americans, who quitted the United States at the period of the revolution, and, desirous of remaining subjects of the British crown, sought a new home in Nova Scotia. The French, or as they are termed Acadians, are chiefly located in the township of Clare, Annapolis, Isle Madame, and other parts of Cape Breton.

The Acadians, whose history and misfortunes are given in a previous page (163), strongly resemble in appearance, manners, and customs, the *Habitans* of Eastern Canada. As an illustration of the tenacity with which the Acadians adhere to their ancient costume, and discountenance among themselves the adoption of any other,—Mr. Macgregor mentions that an unlucky youth having put on an English coat, received ever after, the sobriquet of "Joe Peacock." They are an industrious and peaceable race, and have been treated, subsequent to their first expulsion from Nova Scotia, with justice and kindness. Many of both sexes are engaged in the Cape Breton fisheries.

The Irish are chiefly found in the capital (Halifax); the Scotch, at Pictou and in the eastern districts; the Anglo-Americans, in the west and midland counties. In the county of Lunenburg, there is a race composed of the descendants of a body of German and Swiss protestants who emigrated from Rotterdam in 1753. A Highland settlement was formed some years ago at Pictou; and the representatives of the brave men who fought at Culloden, still preserve the habits, and cherish the loyal feelings which distinguished their ancestors. Wherever there

is a Highland village on the midland coast, a piper is to be found who delights the rustic audience with the martial music which has so often cheered the Scotch in their march to battle; or he animates the festive meetings, where strathspeys and reels are danced with an energy and glee which is not surpassed in the Highlands of Caledonia.

The dark-coloured race in Nova Scotia are the descendants of runaway negroes from the southern part of the United States; of the Maroons of Jamaica, who, on their surrender, after the Maroon war, under a promise to receive lands in another colony, were conveyed to Nova Scotia—than which, a more inappropriate place, as regards either climate or productions, could scarcely have been chosen. In 1800, it was found necessary to remove the greater part of them to Sierra Leone. During the American war, 1812-13-14, many American slaves were received on board British ships of war, and landed at Nova Scotia. Several of these were removed to Trinidad in 1821. The survivors and descendants of these two immigrations are located chiefly at Prescott and Hammond's Plains, in the vicinity of Halifax, and their numbers are now between 3,000 and 4,000.

The Indians still form a distinct class of people; but there are only a few hundred of them left in Nova Scotia.

The classification of the inhabitants according to religion was, according to the census of 1827; churchmen, 28,659; Presbyterians, 37,225; Roman Catholics, 20,401; Methodists, 9,408; Baptists, 19,790; other denominations, 8,365. The census of 1837 does not distinguish the religious profession of the people. Happily there are no animosities on account of religion or of race. Sir John Harvey, the present respected Lieutenant-governor of the province, in a despatch to Earl Grey of the 18th of October, 1848, says: "Men of different races cherish their national remembrances and attachments with mutual respect for each other's feelings, and their descendants form one race, and are known by but one name." The Nova Scotians are a loyal, brave, and intelligent people, gifted with high natural endowments, of prepossessing appearance, pleasing manners, and very hospitable. The society of the colony is more gay and polished than that usually found in a provincial settlement, and its tone is entirely British.

Halifax, the capital of Nova Scotia, and the third city in British America, is situated in

the county of the same name, on the fine harbour before described, in $44^{\circ} 40'$ N. lat. $63^{\circ} 40'$ W. long. The harbour is formed by a bay about 16 miles deep, narrowed in the middle by an island, above which it again expands into what is termed the Bedford Basin, which covers an extent of 12 square miles. The channels E. and W. of M'Nab's Island are protected by York Redoubt, Sherbrooke Tower, East Battery, and several others.

The city of Halifax is built on the E. side of a small peninsula on the declivity of a hill, which rises gradually from the water's edge; its length being about two miles, and its breadth about half a mile, with wide streets, eight of which extend through the city, and are crossed by fifteen smaller ones. Along the water's edge are numerous commodious wharfs, close to which ships can lie for the discharge of their cargoes; above the wharfs are the warehouses, and as the acclivity is ascended are to be seen the houses of the citizens, public buildings, &c. Many of the private residences are handsomely built of stone, and the houses, of wood plastered or stuccoed, have in several instances an imposing appearance. The public edifices are substantial structures; the Government-house at the S. end of the capital is an antique baronial looking structure, and the Admiral's house, a plain stone building, at the N. end commands a view of the harbour, telegraphs, shipping, &c. The "Province Building," erected for the accommodation of the government offices, is one of the finest edifices in our American colonies; it stands nearly in the centre of Halifax, is 140 feet long, 70 broad, and 45 feet high; the Ionic columns are of finely polished freestone, and the whole structure combines elegance with strength and utility. It contains chambers for the Council and Legislative Assembly, the Supreme Court, and all the provincial offices. The Military Hospital and other structures at Halifax do honour to the taste and judgment of the late Duke of Kent, who, when Commander-in-Chief in Nova Scotia was universally beloved. The dock-yard, one of the largest and best stored in the British Colonies, covers an area of 14 acres.

Halifax has, of late years, rapidly advanced in prosperity; in 1790 it contained only 700 houses and 4,000 inhabitants. During the late war, as a military naval station, and the rendezvous for prize ships, the city acquired much wealth. In 1817 it

was declared a free port, and had then 1,200 houses. In 1827 the houses were in number 1,580, and the population 14,439. The population is now nearly 25,000. Many of the houses are still built of wood, but the number of stone and brick buildings is yearly increasing. The trade of the port is brisk, but conducted with such prudent probity that in eight years there was but one bankruptcy among the mercantile community. There are several soap, candle, leather, snuff, and other manufactories, and distilleries and breweries. The markets are well constructed, and supplied with abundance of excellent meat, poultry, fish, vegetables, and fruits, at reasonable prices. The wharfs are large and commodious; the facilities for embarking and disembarking goods perfect, and fresh water is good and plentiful. The port is, therefore, a favourite resort for all persons engaged in maritime pursuits, and an agreeable station for naval and military officers. The following are the distances from Halifax to some of the principal adjacent positions—Cape Breton, 130 miles; Prince Edward's Island, 160; Fort Cumberland, 145; St. Andrew's, 263; Fredericton, 276; St. John's, New Brunswick, 196; and Annapolis, 130; Liverpool, England, about 2,700; Boston, United States, 280 miles.

COUNTIES.—According to the latest government returns, Nova Scotia is divided into 14 counties, five of which occupy the central portion, two the eastern, and seven the western. This appears to be the existing territorial arrangement, which is scarcely worth fuller investigation, since from the recent despatches of the Lieutenant-governor it appears probable that a more equitable distribution will speedily be organized, by which the elective franchise and the advantages of municipal incorporation may be made more extensively available. The five central counties are Halifax, Colchester, Cumberland, Pictou, and Hants, of which *Halifax*, from containing the metropolis, from position and population, is the most important. It comprises four townships, viz., Halifax, Dartmouth, Preston, and Lawrence Town. The land included in the first is said to be the worst in the province; but the coast is almost one uninterrupted succession of harbours, upon each of which a few fishermen have established themselves. Upon that called Sambro, which is safe and of easy access, a settlement was founded in 1780; it now contains a small population, almost wholly employed in fishing. The soil

about St. Margaret's Bay is fertile and well cultivated. The township of Dartmouth lies on the eastern side of Halifax harbour, and contains land, much of which is rendered very productive by the skill and industry of the descendants of the original German settlers. A chain of small lakes intersects the province, which being connected with the source of the Shubenacadie River, greatly facilitated the formation of the fine canal which now completes the water communication between Halifax harbour and the Bay of Mines. The town of Dartmouth was founded in 1750, almost totally destroyed by the Indians in 1756, in part restored by the establishment of a whale fishery in 1784, again impoverished by the emigration of a large portion of the recent settlers in 1792. During the war it greatly increased in size, population, and wealth, and even since the peace it has improved rather than declined, though it cannot in any degree compare with its powerful neighbour Halifax. The township of Lawrence Town lies E. of Dartmouth, and continues about 12 miles along the coast. The soil is rocky and barren, with here and there spots of "intervale" or marshy land. The country behind forms the township of Preston, which was granted in 1784 to 388 proprietors—loyalists, disbanded soldiers, and free negroes. The negroes showed unusual energy, but were removed to Sierra Leone, where a large number of them speedily perished. The remainder of Halifax County not included in the township is generally of inferior and stony soil, yet it contains some thriving settlements, especially on the banks of the Musquedoboit River, and is adorned by several kinds of fine timber.

Colchester (formerly a part of the county of Halifax), is situated E. of the river Shubenacadie, and contains three townships, Truro, Onslow, and Londonderry, besides the settlements of Economy, Stewiack, Tatamagouche, Salmon River, Shubenacadie, Brookfield, &c.

The township of Truro, which comprises 30,000 acres, has a highly pleasing aspect when viewed from the high land on the north-east. The whole sweep of the Basin of Mines, as far as Cape Blomedon, embracing a space of more than 60 miles, is distinctly visible, while the two villages, into which the township is mainly divided, with their level marshes relieved by finely swelling uplands, and sheltered by wooded and undulating hills,

compose the foreground of this beautiful landscape. The indenture made by the Shubenacadie on its western boundary, is a striking feature in this scene, and when viewed with a previous knowledge of the singular character of the river, it invests it with a peculiar interest. The Shubenacadie, at the ferry, where it is a mile in width, rises 50 feet at flood tide, and at the distance of 12 miles, 25 or 30 feet. At times the stream runs at the rate of seven and eight miles an hour, but notwithstanding the rapidity of the current, the river is securely navigable to the distance of 30 miles, by those acquainted with its eddies. Its banks are precipitous, but in general of that formation which admits of the most fantastic appearances, being shaped by the waters, and in many places fringed and overhung by trees of great beauty. But these banks, so romantic and inviting to the lovers of natural scenery, are also enriched with inexhaustible treasures of gypsum and lime. Quarries of excellent freestone are equally accessible. The line of the bay, being almost everywhere level, presents, with the exception of Savage's Island and the site of the Presbyterian Meeting-house, only those views which the industry of man has created.

The houses are well built, and the township has handsome churches, a court-house, custom-house, and other public buildings, with good roads to Halifax, Pictou, &c. The adjoining township of Onslow contains land of excellent quality and valuable coal-mines. The same remark applies to Londonderry, and indeed to the several settlements before-mentioned, which together form a tract of country remarkable both for beauty of scenery, for vegetable and mineral wealth.

Pictou contains three townships, viz., Pictou, Egerton, and Maxwellton. The general appearance of this district resembles that of most parts of the province, its surface being everywhere diversified by hill and dale, seldom approaching to the altitude of mountains, and nowhere presenting any very extended plains. In consequence of this inequality in its formation, it is well irrigated by streams and brooks, which, by their union, form several rivers. Of these, the East and French Rivers fall into Merrigomish, the East, Middle, and West Rivers, flow into the harbour of Pictou, and Big and Little Rivers discharge themselves into Carriboo, between which and the boundary of the district of Colchester, are the rivers Toney and John.

The north coast, though last settled, is evidently a most important part of Nova Scotia. The fertility of the land, its proximity to the fisheries, its coal and other mineral productions, naturally lead to the conclusion that it will, at no distant period, be the seat of enterprise and wealth. The harbour of Pictou is admirably situated for becoming the emporium of the trade of the Gulf of St. Lawrence, and is already the centre of enterprise in that part of the province. Between Baie Verte and the Gut of Canso, it occupies a nearly central position; and from the latter place to Quebec, although there are several harbours, both sheltered and commodious, it is not surpassed by any, either in facility of entrance, good anchorage, or general safety. It has a bar on its mouth, on which is 22 feet at low water; inside the bar, it becomes a capacious and beautiful basin, with five, six, and nine fathom anchorage on a muddy bottom.

The chief town, also named Pictou, situated about three miles from the entrance of the harbour, is a free warehousing port, and has a large and increasing trade in timber, coal, and fish. The first house was built in 1790; in 1827, it contained a population amounting to 1,439 souls, with annual exports to the value of £100,000. The houses are good, many of them being built of stone, and there is an excellent academy, library, and grammar school, besides the more ordinary public buildings. The people are chiefly of Scottish descent, and remarkable for their unwavering attachment to the language, music, and costume of the land of their forefathers. The soil of this county is in general very favourable to agriculture, and susceptible of a high state of cultivation: and the last census of produce (that of 1827) shews a great quantity of wheat raised within the county.

Cumberland county is bounded on the N.W. by Chignecto Channel, the Missisquoi River, and part of New Brunswick; on the E. by the Straits of Northumberland; on the S.E. by the district of Colchester; and on the S. by part of the Bay of Fundy. Previous to the year 1784 (when New Brunswick was created a separate government), the township of Sackville was contained within the limits of this county, but it is now a part of New Brunswick, and is called Westmoreland. Cumberland county contains two townships, Amherst and Wallace, and a considerable num

ber of settlements not comprised within either; viz., Fort Lawrence, Maccan, Nappan, Minudie, West Chester, Pugwash, Fox Harbour, River Philip, Goose River, &c. Adjoining the boundary line, is Fort Lawrence settlement, lying between the Missiguash and the La Planche. On the former river, which is navigable about two miles, there are 2,000 acres of dyke land, one half of which is in New Brunswick; and on the latter river 4,000 acres, one half being in New Brunswick, and the other in Nova Scotia. The fertility of this county is unquestionable, and not inferior to any other portion of America of the same extent. Here stood the rival forts of Lawrence and Beau Sejour (now Cumberland), separated from each other by the little stream of Missiguash. From the bastion of Beau Sejour fort there is a splendid view, embracing the great Tanteimarr and Missiguash meadows, Baronsfields, Westmoreland, and the country at the foot of the Shepody mountains; vast stacks of hay cover these alluvial lands, as far as the eye can reach, and the substantial farm-houses, and numerous herds, bespeak a wealthy and independent yeomanry.

The township of Wallace contains several flourishing settlements. Wallace Town is situate at the mouth of the noble bay of that name, which is navigable for the largest ships above six miles, and for smaller ones above 12. The river Remsheg, after a course of 25 miles, discharges itself into the bay. Pugwash Bay is one of the finest harbours in the county; and the shore is so bold that vessels of 500 tons burthen may lie at all times in safety within 20 yards of it; above the channel, which is not more than a quarter of a mile wide, it becomes a beautiful basin, into which the Pugwash River discharges itself. The river Philip, which unites with several others, also discharges itself into the sea, near Pugwash Harbour. Fox Harbour, on Pugwash Bay, was settled 30 years ago by Scotch Highlanders.

Besides coal, freestone, and grindstone, gypsum abounds at the head of Chignecto Bay, and occasionally on the Maccan. Lime is also found in the vicinity of Amherst, at the river Philip, and at Maccan and Nappan. Although its value in agriculture is not unknown to the inhabitants, it has not been often applied, nor is it probable that it ever will be: the numerous bays, rivers, creeks, and coves by which Cumberland is intersected, presenting in the alluvial deposit a more simple and not less valuable manure.

The dyked land in this county, exclusive of salt marshes and intervale, exceeds 17,250 acres. West Chester is situated in the centre of the county, on the Cobequid highlands. It was settled by loyalists from New York; but, although the soil is good, the position appears to have been ill chosen, and the settlement has not prospered. The inhabitants of this county are chiefly emigrants (or their descendants) from New York, from the North of Ireland, and from the county of York in England.

The county of Hants is bounded on the W. by Horton, on the N. by the Basin of Mines, on the E. by the Shubenacadie River, and on the S. by parts of the counties of Halifax and Lunenburg. It contains six townships, viz., Windsor, Falmouth, Newport, Rawdon, Kempt, and Douglas.

Windsor, the shire-town of Hants County, is delightfully situated on the Avon River, and contains many respectable private residences and good public buildings; it is distant from Halifax 45 miles, the road to which has been rendered level, and is kept in an excellent state of repair. After passing the boundary of Halifax County, the appearance of the land indicates a decided change in its quality. The sombre spruce and fir, and the dwarf birch, that clothe the country for 20 miles from the capital, are succeeded by a growth of beech mingled with hemlock, elm, and maple; and the surface of the ground is no longer encumbered with heavy masses of stone. From the Ardoise hills the whole of this township is displayed to view, and on a nearer approach it loses nothing of the *prestige* imparted to it by the distant prospect. It was held in great estimation by the French, on account of its extensive and fertile meadows, which they inclosed with dykes, and brought into a high state of cultivation. The crops of wheat raised here were so exceedingly abundant, that for many years previous to the war of 1756, a great quantity was annually exported to Boston.

Newport Township lies on the eastern side of the St. Croix. The upland is good, especially on the banks of that river and the Kennetcook; it is well cultivated and thickly settled. Douglas Township is one of the best in the province, from the large proportion of intervale, marsh, and upland which it contains, and its great mineral resources. The lands on the Shubenacadie are of unsurpassed fertility. Falmouth and Rawdon have fertile uplands. Kempt, which

is situated on the borders of Mines Basin, has good cod and herring fisheries.

The eastern portion of Nova Scotia now contains two counties, viz., Sydney and Guysborough; but the latter has, till very lately, ranked only as a township, and as such will be mentioned here. Sydney is divided in two districts, Upper and Lower; the Upper forms a triangle, the S. side of which measures 36 miles, the W. 25, and the sea-coast, including the circuit of St. George's Bay, about 50 miles. In an agricultural point of view it is far superior to the Lower District, and notwithstanding the numerous harbours and valuable fisheries possessed by the latter, it is much more densely populated. A large portion of its inhabitants are Scotch; an extensive tract on the N. coast has received the name of Arisaig, and includes settlements called Knoydart, Moydart, &c.

The township of Dorchester, or Antigonish, situate on or about the bay of that name, contains the shire-town of the district, also called Dorchester. It is an orderly and pretty place, with a court-house, a handsome Roman Catholic chapel, a presbyterian and Baptist church, and good private houses. The harbour is six miles in length, but the entrance is narrow and difficult. The land round St. George's is formed into the settlements of Pomquet, Tracadie, and Aubushée, the inhabitants being chiefly Acadians, who pursue the "quiet tenor of their way," here, much in the same manner as elsewhere, but that they employ themselves more in the fishing and coasting trade. The Lower district extends, on its interior or northern boundary, from Cape Porcupine, at the N. end of the Gut of Canso, to the eastern boundary of the district of Halifax, 40 miles; on its western side, from the southern boundary of Pictou to the mouth of Ekemseegam Harbour, 30 miles; and on the sea-coast, including the shore of Chedabucto Bay, 120 miles. According to Bouchette, the township of Guysborough reaches from Crow Harbour to the northern bounds of the lower districts. The original grant was 100,000 acres, made to some American loyalists in 1784. The land of this district is extremely good, but the fisheries afford such lucrative employment, that it is cultivated little more than sufficiently for the internal supply.

The Bay of Chedabucto is the best fishing-ground in Nova Scotia, and can scarcely be

surpassed in productiveness by any other in the world. Great quantities of cod appear early in the season, and, in the summer, herrings of good quality abound. The shoals of mackerel in spring and autumn are of almost incredible extent. Mr. Murray states, that in Guysborough Harbour, 2,000 or 3,000 barrels have been caught in one day, and a seine has sometimes been known to enclose from 800 to 1,000 barrels at a single draught. Crow Harbour and Fox Island are the chief seats of the fishery. The township of Manchester lies between Milford Haven and the Gut of Canso. The soil is very good. The land on the coast of the Atlantic is of the usual description: remarkable for the excellence of its harbours. Country Harbour is a noble port, navigable for the largest ships ten miles above its entrance. On the eastern side, a small town, called Stormont, was built by American refugees, in 1784, but it does not appear to have prospered. Sherbrooke, situated at the head of the navigation of the fine stream St. Mary, is accessible to vessels of 50 to 100 tons, and has a considerable lumber trade.

We now turn to the counties which occupy the western portion of Nova Scotia, beginning with *King's County*, which is bounded on the N. by the Bay of Fundy, on the S. by Lunenburg and Hants, on the E. by Mines Basin, and on the W. by Annapolis. It contains four townships, viz.: Horton, Cornwallis, Aylesford, and Parrsborough. Horton was originally settled by the French, and in it was situated the French village of Minas, of which few traces now remain, excepting the scattered groups of willows, the invariable appendage of an Acadian settlement. The "Grande Prairie" comprised upwards of 2,000 acres of land, dyked and inclosed by the Acadians; and besides this, there were about 5,000 acres also inclosed by their diligent labour. Some years after their expulsion, the emigrants from New England, in 1760, found the dykes in a state of great dilapidation, and the meadows under water; but, with much difficulty and considerable expense, the embankments were restored, and the land has become surprisingly productive.

Kentville is the chief place in the township: it stands on the borders of Cornwallis; the river Gaspereaux, which flows through it, abounds with excellent fish, and is famous for a species called "gaspereaux." Cornwallis Township has an excellent soil, and, from its beauty, has been styled "the garden of the province;" but the adjoining township of

Aylesford is little inferior to it in either respect. Parrsborough is broken and hilly, but not unproductive. The village of that name stands on the neck of land between the bay and Mines Basin, and from thence packets sail frequently to and from Windsor and Horton.

In this district there is a view of singular and remarkable beauty, which opens unexpectedly on the traveller who descends the Horton mountains. A sudden turn of the road displays at once the townships of Horton and Cornwallis, and the rivers that meander through them. Beyond is a lofty and extended chain of hills, presenting a vast chasm, apparently burst out by the waters of 19 rivers, that empty themselves into the Mines Basin, and thence escape into the Bay of Fundy. The variety and extent of this prospect, the beautiful verdant vale of the Gaspereaux, the extended township of Horton, interspersed with groves of wood and cultivated fields, and the cloud-capt summit of the lofty cape, that terminates the chain of the north mountains, form an assemblage of objects rarely united with more striking effect.

Dr. Gesner says, "the scenery in the settlement of New Canaan is extensive and pleasing. Besides a view of the great valley seen from Beech Hill, we have here to the S.W. deep ravines, with steep banks, beneath which winding channels are formed, giving passage to torrents of rain, after they have descended and washed the oval summits of the hills. It is true there are no elevations of great height in this neighbourhood, but the earth is deeply furrowed by the upturned ridges of slate, and offers a landscape singularly diversified, when contrasted with the level appearance of the sandstone district, over which the lofty peak of the frowning Blomidon may be seen, ready to fall into the beautiful basin curling at its base. By turning the eye southward, a long low depression will be perceived. Here the Gaspereaux River, having taken its rise from a large lake, rolls on from cataract to cataract, or murmurs among the strata of slate, where it is compelled to pass."

The county of Lunenburg extends about 40 miles S. W. from that of Halifax, its extreme width being 35 miles, exclusive of the space occupied by nearly 300 small islands, about 200 of which are contained in Mahone Bay, and contribute to the safe anchorage for vessels of the largest magnitude which this spacious harbour affords. It is county con-

tains three townships, Chester, Lunenburg, and Dublin, the second of which is next to Halifax, the oldest formed by the English in the province. 400 families of Dutch and Germans were brought out in 1753, at the expense of the British government, which afterwards continued to contribute largely to their support. The settlement has passed through many vicissitudes. Since the war it has greatly increased both in population and wealth. Its annual exports of fish are very large. The people are honest and industrious; they continue to live in the old German style, and to speak the German language. Their houses, furniture, pictures, &c. (for they have all these), are of the same heavy and old-fashioned, but solid and comfortable description. The townships of Chester, Mahone Bay, was settled in 1760. Chester Town is situated on Mahone Bay, about nine miles from its mouth, was settled in 1760, and has a small but good harbour. It is in a thriving state. The inhabitants carry on a considerable lumber trade and fishery, and possess a number of small vessels and several saw-mills. Dr. Gesner speaks in enthusiastic terms of the beauty of Mahone Bay, declaring it to present "one of the most delightful prospects in Nova Scotia. A deep navigable basin, in which numerous islands exhibit their evergreen summits, almost surrounded by a closely populated and neatly cultivated country, are not often seen in that natural and delightful order which is here exhibited." Dublin Township is situated on the river and harbour of La Have, the lands bordering on which are stony and mountainous, but abound with fine timber. On the river there are upwards of 30 saw-mills. In the outer harbour of La Have, are many beautiful islands, affording shelter for vessels, and convenient places for drying and curing fish, of which considerable quantities are taken here. The inner harbour, formed by the river, is capacious, and navigable for 15 miles. The bar at the entrance has 12 feet at low water; inside there are soundings from eight fathoms gradually to three.

Queen's County extends about 30 miles along the coast, and contains two townships, Liverpool and Guysborough. Liverpool is the shire-town of the county, and was made a warehousing port in 1834. It is well, and even regularly built, and has an unusual number of public buildings. A handsome drawbridge, 1,100 feet long, has been erected by the inhabitants across the

harbour, at a cost of £4,000. The harbour never freezes over, and is valuable as a fishing station; but its usefulness is much impeded by a bar at the entrance, only nine feet deep at low water. On Coffin's Island, at its mouth, is a beacon 70 feet high, with revolving lights. Port Medway, the entrance to which is marked by a high hill on the western, and by low, ragged islands on the southern side, is another capacious harbour, safe and navigable; on it is situated a hamlet, bearing its name, and another called Mill Village, said to have the best land in the county. This, however, is not very high commendation; yet, Sir John Harvey speaking of this coast says: "except along some of the headlands, from the bald rocks of which the ceaseless surge of the Atlantic has swept every trace of soil or vegetation, there is a covering of earth, generally a stiff clay, often, as on the front lands of Lunenburg, Halifax, and Yarmouth, and on the 'hardwood hills,' everywhere scattered through the barrens, of great depth and proved fertility. The labour of clearing lands on this side of the province is very severe, from the prevalence of the surface-stone; but, when cleared, it is valuable, from its proximity to the open harbours, the fisheries, and the growing commercial towns." In 1783 Guysborough Township, on Port Mouton, was settled by the disbanded soldiers of a corps named the British Legion, who had served, with distinction, under General Tarleton; but a dreadful fire, which consumed nearly everything they possessed, reduced them to want. The settlement has never since prospered, and is now the abode only of a few fishermen and lumberers. The adjoining ones of Ports Jolie and Hebert, are also nothing more, although both are shoal harbours.

Annapolis County is bounded on the N. and W. by the Bay of Fundy. At the bottom is the deep bay of St Mary, formed by Long Island, and the narrow peninsula of Digby Neck. Annapolis contains large ranges, both of dyked land and productive, though somewhat stony, upland. It contains five townships, viz., Annapolis, Granville, Wilmot, Clements, and Clare. Annapolis was the capital of the province while in the possession of the French, and continued to be so under British rule, until 1750, when it was superseded as such by Halifax. The town is built on a peninsula, which projecting into the river, forms two beautiful basins, one above and below the town. The fortifications, and even many of the public buildings

of this once famous place are falling into decay from disuse; and the rise of Digby and other places in its vicinity, have greatly injured its trade, while the land immediately surrounding it, being the property of government, forms another barrier to its extension.

Granville and Wilmot Townships comprehend, for 46 miles, the peninsula formed by the river Annapolis, running parallel to the Bay of Fundy; both are well cultivated, thickly settled, and contain a large proportion of excellent land, consisting of dyke, salt marle, intervale, and upland. Bridge-town (so called from a bridge that here crosses the Annapolis) is situated at the head of the navigation of that river, and is a very thriving village.

Clement's Township possesses a rare combination of advantages in good land, valuable fisheries, fine timber, and great mineral wealth. At Moose River the Annapolis Iron Mining Company have erected a foundry, and metal of a very superior quality has been produced.

Clare Township is almost exclusively occupied by the Acadians, who here preserve their peculiar habits and customs, even more exclusively than in any other portion of Nova Scotia. It possesses a peculiar interest from having been allotted to the Acadians by Lieutenant-governor Francklin, when suffered to return from their sad exile. This district was then little better than a wilderness, but the soil was cultivable; the seaweed on the shore afforded them abundance of excellent manure; and, stimulated by the desire of creating for themselves again a position in their native land, they laboured with persevering energy until they had raised Clare into a prosperous settlement. The whole township forms but one parish; there are two handsome Roman Catholic chapels, and the people live a pious and contented life. In 1820 a dreadful conflagration destroyed nearly all their property; but the liberal contributions of the inhabitants of Nova Scotia and New Brunswick aided them in completely retrieving their loss.

The *county* (until recently a township of Annapolis County) of *Digby* occupies the strangely-formed peninsula in the Bay of Fundy which bears its name; it includes within its limits Long and Brian Island, and some good tracts of marsh and intervale land. Of its exact limits there are no data in the Colonial Office. The principal sources of its increased and increasing pros-

perity are its excellent cod and mackerel fisheries, and the shelter which it affords to vessels—the coast in its more immediate vicinity being almost devoid of harbours.

The town of Digby is delightfully situated on the basin of Annapolis, contains several good public buildings, and about 200 houses, and from its salubrious air, is much frequented as a watering-place. It had a wide celebrity for its cured herrings, known over all America under the name of Digby chickens, but of late years they have not been so numerous.

The county of Yarmouth (until recently a township of Shelburne county) forms the central portion of the W. coast of Nova Scotia, opposite the United States. The face of the county is very agreeably diversified, and in point of scenery it is one of the most beautiful portions of Nova Scotia. The climate is more temperate than that of less insulated parts of the province, the mercury very rarely falling as low as zero, nor rising higher than 80°: the mean temperature is about 48°. At a short distance from the salt water, apples, plums, and cherries, succeed well; and on the banks of the Tusket, pears, peaches, and melons ripen. The sea-breeze and the fogs, which occasionally occur in summer, render Yarmouth more suitable for the production of potatoes and grass, the manufacture of butter and cheese, and the rearing of cattle, than for the culture of grain. The soil of the upland is in general strong and productive, but requires much labour in the first instance, before it can be brought into a state of culture. The marshes, though extensive, are very inferior to those at the head of the Bay of Fundy. They yield, when dyked, good grass, but are too spongy to admit of the use of the plough, partaking more of the quality of peat, than of alluvial deposit. The principal harbour is Cape Fourchu, or Fourché, which is large and well sheltered. It is surrounded by mud flats, that are bare at low tides, but the channel is navigable for large ships, as far as the upper part of Yarmouth village, and for small craft as far as the foot of the rock at Milton, while the Sound affords good anchorage for vessels of any size.

The land is well irrigated by the lakes and rivers which intersect it. The Tusket is navigable for boats 32 miles from the sea, and for ships eight miles. Chebogue River is navigable for seven miles from the sea, and, at its mouth, expands into a good harbour.

The growing importance of Yarmouth is remarkable; its rapidly-increasing imports and exports, and the high state of cultivation of the greater part of the district, speak volumes for the skill and energy of its inhabitants, whose enterprising character is evidenced by the sad fact, that from the formation of the settlement in 1760, to 1837, the number of vessels lost belonging to Yarmouth was 167; and of these, 34 were never heard of.

Shelburne county is bounded on the S. and W. by the Atlantic. It is, on the whole, a stony and intractable country, traversed in the interior by ranges of the Blue Mountains; but it contains several good rivers;—the Tusket River, before mentioned; the Sable, which has a course of 20 miles; the Jordan forms the fine harbour of Shelburne, considered one of the best in America; and the Clyde, (so called from its resemblance to the beautiful Scotch river of that name) rises 40 miles in the interior, in an extensive chain of lakes, and at its junction with the sea forms the two harbours called Cape Negro. Shelburne County comprises three townships—Shelburne, Barrington, and Argyle. Shelburne Township was founded by American loyalists, 500 families of whom arrived in the spring of 1783. They laid the plan of a spacious and handsome town, which they expected would rival Halifax; and in the autumn of the same year, their numbers were increased, by an accession of settlers, to upwards of 12,000. The town arose with astonishing rapidity. Money, to the extent of half a million, is supposed to have been lavished upon it. But one important point had been unhappily overlooked; they had forgotten, or miscalculated the long period that must necessarily elapse before the sterile soil could yield them even a precarious subsistence, in return for skilful and unwearied labour. The place was soon comparatively deserted, and is now in a very dilapidated state, notwithstanding the excellence of its harbour. On M'Nutt's Island, at the entrance of the haven, in lat. 43° 40' N., long. 65° 8' W., is a light-house, with two fixed lights, one above the other; the highest 125 feet above the sea. Barrington Township has a stubborn soil, but much of it is covered with a black chocolate-coloured turf, which, when carefully cultivated, produces abundant crops. The climate is much milder than in the eastern portion of the province: the inhabitants subsist almost entirely by fishing. Cape Sable Island (not that on which the first disastrous settlement was made by the

190 AGRICULTURAL PRODUCE AND LIVE STOCK OF EACH COUNTY.

French) is an adjoining islet belonging to this township, and the most southern point of Nova Scotia. Barrington harbour is useful only for small vessels. At the head of it is the village of that name. Argyle Township adjoins Yarmouth, which it resembles in many respects; but it does not equal it in fertility. The large expanse called Argyle Bay forms the estuary of the river Tusket, and contains about 300 islands, called the Tusquets, many of which are well cultivated, and afford shelter and anchorage for small vessels. Argyle Town was settled by loy-

alists and disbanded soldiers. It is not, at present, a place of much importance. About 13 miles from the shore lies Seal Island, which is resorted to by the fishermen for wood and water, and has been termed "the elbow of the Bay of Fundy." The principal harbour in the township is Pubnico, on which there is an Acadian settlement. There is another at Eelbrooke.

For the leading features in the different counties described in this chapter, I am indebted to Messrs. Haliburton, M'Gregor, Bouchette, Murray, Gesner, and others.

Production and Live Stock of each County in Nova Scotia, according to the last Census in 1827.

Counties in 1827.	Land Cultivated.	Produce.				Stock.			
		Wheat.	Other Grain.	Potatoes.	Hay.	Horses.	Horned Cattle.	Sheep.	Swine.
	Acres.	Bushels.	Bushels.	Bushels.	Tons.				
Halifax . . .	14,160	5,426	32,317	202,642	11,873	1,480	7,588	8,759	4,160
Chelchester . . .	29,135	18,644	64,018	292,235	16,756	1,440	10,177	12,713	6,912
Pictou . . .	49,181	38,198	98,562	126,654	11,750	1,609	11,701	21,128	12,945
Cumberland . . .	29,308	14,152	34,067	269,807	13,790	1,264	8,226	11,576	5,533
Sydney . . .	39,465	21,919	38,173	363,288	15,794	848	15,706	24,349	7,705
Hants . . .	37,531	18,520	45,328	227,948	19,977	2,486	9,475	14,863	5,927
King's . . .	34,150	25,668	65,100	538,903	25,333	1,789	12,580	18,574	18,514
Lunenburg . . .	13,467	1,117	33,146	334,163	10,577	202	8,978	11,238	5,331
Queen's . . .	5,630	12,362	3,476	52,817	3,577	763	2,436	2,737	1,941
Annapolis . . .	22,174	5,410	385,478	26,309	21,549	1,351	13,872	27,042	6,804
Total . . .	274,501	161,416	799,665	2,434,766	150,976	13,232	100,739	152,979	75,772

The agricultural produce has much increased since 1827; but, in 1845, the potato disease appeared in Nova Scotia, and destroyed nearly the whole crop. In 1846, the disease spared the early potatoes, but none of the late planted were saved. In 1847 there was immense loss, partly from the rot and partly from the potato not growing, in consequence of the unsoundness of the seed. In addition to these calamities, the weevil, or fly, destroyed, in 1845-7, a very large proportion of the wheat crop. There has, consequently, been severe agricultural and general distress in the province, which has been borne with great fortitude; and in the midst of their privations, the colonists of Nova Scotia subscribed *one thousand pounds sterling*, to aid their suffering fellow-citizens in Ireland and in Scotland.

Nova Scotia is now recovering from its losses, and a few successive bountiful harvests will (under Providence) restore its usual plenty and prosperity. Horticulture is carried on with great success in the neighbourhood of the towns. The apple orchards of the western counties are very productive, and

extend along the road-side, through the township of Granville, in an unbroken line, for 30 miles. Apples and cider are annually exported. Potatoes are sent to the United States, cattle to New Brunswick, and sheep and live stock to Newfoundland. Fine flour is still largely imported from the United States.

According to the "Blue Book" for 1847, the total number of acres granted and sold in Nova Scotia and Cape Breton, is as follows:—

Granted.	Nova Scotia.	Cape Breton.	Total.
Acres granted	4,604,799	719,836	5,324,635
" sold	248,168	132,355	380,523
" remaining ungranted	4,490,511	1,295,109	5,786,620
" granted in 1847	30,536	6,118	36,654
Number of grants	208	50	268

About 50,000 acres have been granted for the support of religion and schools. There have been set apart for the remnant of the Indians in Nova Scotia, 12,050 acres of land, and in Cape Breton, 12,000 acres.

Sir John Harvey states that the land under

tillage in 1848, comprised 400,000 acres, and adds, that there is, perhaps, an equal amount chopped, used as pasturage, or yielding from the virgin soil, by the rude process common to new countries, a valuable portion of subsistence to recent settlers. A very large part of the whole, perhaps 9,000,000 acres, is still covered with primeval forest, or has only changed its aspect for the worse from the action of fires, which, in the heat of summer, often run over uncultivated portions of the country, deforming its surface and injuring its fertility.

The grants and sales of land in Nova Scotia, from 1831 to 1840, were :—

Grants.				Sales.	
Years.	Acres.	Years.	Acres.	Years.	Acres.
1831	25,328	1836	5,474	1841	5,061
1832	6,254	1837	3,500	1842	1,924
1833	2,229	1838	1,679	1843	4,235
1834	5,327	1839	1,450	1844	8,987
1835	7,650	1840	6,225	1845	21,921
—	—	—	—	1846	35,784

During the same period, there were three grants to military offices, amounting to 2,400 acres.

Abstract of the Sales of Crown Land, &c., from the 31st December, 1838, to the end of 1846.

Years.	Number of Acres.	Amount of Sales paid in.	Instalments of preceding years.
1839	10,612	£1,122	£580
1840	6,935	836	699
1841	5,061	722	278
1842	1,924	328	236
1843	4,235	583	75
1844	8,987	1,087	35
1845	21,921	2,536	42
1846	35,784	3,974	151
	95,459	11,188	2,096

The legislature of Nova Scotia has continued for three years an "Act on the Disposal of Crown Lands," which expired in 1846. The principal provisions are :—1st. The Governor and Council to name any fixed price on lands, not less than 1s. 9d. per acre. 2ndly. To grant lands, at such price as they think fit, to occupants who have held and improved the same, without authority. 3rdly. To make free grants to retired officers, and to non-commissioned officers and privates. 4thly. To make reserves, and free grants of such reserves, for the use of the Indians.

By a recent colonial act, the price is further reduced to 1s. per acre; but it is doubtful whether the measure will be confirmed.

The number of immigrants in Nova Scotia

and Cape Breton was, in 1845, 615; in 1846, 698; in 1847, 2,000; in 1848, 140.

The Lieutenant-governor strongly deprecates any extensive emigration of the poorer classes from the United Kingdom to Nova Scotia, on the ground that the province would not afford the people sufficient profitable employment.

GOVERNMENT.—The administration rests on the same popular basis described in the history of Canada. There is a Lieutenant-governor appointed by the crown.

The *Executive* Council consists of about six members, including the President, the Secretary of the province, and the Attorney and Solicitor-general.

The *Legislative* Council comprises 19 members, including the Bishop of Nova Scotia.

The *House of Assembly* is formed of 51 representatives, of whom the counties of Halifax, Pictou, Cumberland, Hants, King's, Queen's, Lunenburg, Sydney, and Guysborough, each return two members, and the other counties one member each. The island of Cape Breton sends six members to the Provincial Legislature; viz., from Cape Breton County, one; Richmond County, one; Inverness County, two; and the townships of Sydney and Arichat, each one member. Halifax township returns two members, and the remaining 18 townships in Nova Scotia, one member each.

The qualification for electors is the possession of land yielding an income worth 40s.; a franchise easily obtainable, owing to the low price of land.

The Nova Scotians enjoy self-government in all things regarding their own internal affairs, as perfectly as a reflective and practical people can desire. Halifax is the only incorporated city; but the townships possess some municipal privileges.

Military Defences.—The militia returns for 1847, show a total of 36,066 men for Nova Scotia, and 8,182 for Cape Breton—44,248. They are divided into regiments and battalions; and subdivided into about 420 companies, with 42 lieutenant-colonels; 51 majors; 362 captains; 318 first lieutenants; 349 second lieutenants; 42 adjutants; 12 pay-masters; and a full staff of commissioned and non-commissioned officers. The rank and file, between 16 and 18 years of age, are 3,618; between 18 and 45 years, 28,996; between 45 and 60 years, 5,839.

The militia regiments are officered under commissions from the crown; and when em-

bodied for actual service, are subject to martial-law. Every man in the province has a right to carry a gun, and there are few unpractised in the use of fire-arms. The militia of Nova Scotia could soon be rendered a very formidable force, to the number of about 50,000 men.

Two or three regiments of the line are always stationed in the province, which is further protected by the visits of the ships of the royal navy in summer.

The military posts and works, protected by Great Britain, and under the control of the Board of Ordnance, are Fort George or Citadel, Grand Battery, Ogilvie Battery, Prince of Wales Tower, Port Pleasant Battery, N.W. Arm Battery, Fort Needham, Fort Charlotte, George's Island, Fort Clarence, York Redoubt, Sherbrooke Tower, Sambro Island, and Sackville, all at *Halifax*; and at *Windsor*, Fort Edward; at *Annapolis Royal*, Fort Anne; and at *Cape Breton*, Sydney Battery. Various batteries have been constructed at the expense of the colony, for the protection of the different harbours along the coast: there are guns at most of them, which are in charge of the militia.

Laws and Courts.—The laws in force are: 1st. The common law of England. 2nd. The statute law of England. 3rd. The statute law of Nova Scotia. There is a Court of Error, Court of Chancery, Supreme Court, Court of Vice-Admiralty, Court of Marriage and Divorce, Courts of General Sessions of the Peace, and Courts of Probate. Besides these, the magistracy of the province, scattered over every county, possess a power of commitment for criminal offences, and for the collection by summary process of debts under £10. The Supreme Court makes the circuit of the province, and holds sittings twice a-year in each county, in addition to three terms at Halifax. The criminal calendar is generally very light; indeed, it may be safely asserted, that in no part of her Majesty's dominions is the average amount of crime less, in proportion to the population, than in Nova Scotia. In all these courts, natives of the province preside; and the bar, which practises before them, numbering 140 members, includes the names of but very few not born in Nova Scotia.

The *Court of Error* consists of the Lieutenant-governor and the Executive Council. Appeals lie from the Supreme Court, where the sum in dispute exceeds £300.

The *Court of Chancery* is similar in its

constitution, powers, and mode of procedure, to the Chancery Court in England. The Lieutenant-governor is Chancellor, *ex officio*. He is ordinarily assisted by the Master of the Rolls and four Masters in Chancery. No salary is attached to the office of Chancellor. His fees, in 1844, amounted to about £30. The Master of the Rolls receives a salary of £650, without fees. The Masters receive no salaries, but are entitled to fees regulated by law.

The *Supreme Court* consists of a Chief Justice and four Assistant Judges. It sits at Halifax, three times a-year, and in each of the counties of the province, twice a-year, and exercises a general criminal and civil jurisdiction throughout the province.

The travelling expenses of the judges, when on circuit, are defrayed by an allowance of one guinea per day to each, paid from the provisional treasury.

The *Courts of General Session of the Peace* are, in constitution and practice, similar to the Courts of Quarter Sessions in England, but the power of trial by jury therein, has been transferred to the Supreme Court.

Courts of Vice Admiralty.—The Judge of this court is also the Master of the Rolls in Chancery. No salary is attached to the office. Very little business is transacted in this court.

Court of Marriage and Divorce.—Consists of the Lieutenant-governor and the Executive Council; the Lieutenant-governor being President and the Chief Justice Vice-president. Established by Provincial Act, 4 Vict., c. 13.

Courts of Probate.—The Provincial Act, 5 Vict., c. 32, establishes courts for the Probate of Wills and granting Administrations in each county of the province. The courts consist respectively of a judge and registrar, paid by fees.

The Press—is as free as that of England. There are at present 13 newspapers published in the capital, and five in the interior. The circulation of English newspapers has increased an hundred-fold since the establishment of the line of steam-packets, and all the leading periodicals of the United Kingdom are looked for with as much eagerness, and received with as much certainty, as the London newspapers were in Scotland and Ireland a few years ago. The cheap literature of the mother country is also widely diffused over this province, while the more expensive books find their way to the collections of the wealthy or into the public libraries.

The "Art Union" has been the means of promoting the dissemination of paintings and engravings. Among the public institutions, is the Halifax Subscription Library, the Halifax Mechanics' Subscription Library, the Halifax Mechanics' Institute, Dartmouth Mechanics' Institute, Sydney (Cape Breton) Mechanics' Institute, Pictou Literary and Scientific Society, and the Young Men's Debating Club, Halifax. There is a Central Board of Agriculture at Halifax; and twenty Agricultural Societies in Nova Scotia and Cape Breton. There is also a Horticultural Society at Halifax.

Education.—The provincial legislature, as also many private individuals, have made strenuous efforts for promoting the benefits of education. By an Act passed in 1811, any settlement consisting of 30 families, raising a sum of not less than £50 by assessment, after the manner of poor-rates, are

entitled to £25 from the treasury of the province, towards the establishment of a school or schools.

At Halifax there is a National, a Catholic, Acadian, Grammar, and St. George's schools. There are academies at Pictou, Windsor, Horton, Yarmouth, Annapolis, &c. There are besides, in the several counties and districts of the province, 1,025 common schools, at which, in 1847, 34,380 children received instruction. A large number of these are poor children, who are taught gratuitously. These schools are supported, in part, by the province, and partly by subscription. The expense of each school, including stationery and fuel, is about £30 per annum. There are also about 40 schools in different parts of the country, which are chiefly supported by the "Society for the Propagation of the Gospel." A respectable high school, or academy, is maintained in each county.

Abstract of Returns of Common Schools, for the Year 1842.

County or District.	Number of Schools.	Scholars.			Income. (Shillings and Pence excepted.)		
		Paid.	Free.	Total.	From People.	From Treasury.	Total.
Halifax, Western, exclusive of City	17	800	103	903	£389	£209	£599
Halifax, Eastern	15	..	..	494	513	140	654
Colchester	53	1,500	165	1,665	1,419	329	1,749
Pictou	78	3,872	195	3,977	2,146	542	2,688
Sydney	36	911	100	1,011	849	301	1,150
Guysborough	22	699	111	810	446	231	677
St. Mary's	13	337	54	391	233	90	324
Hants	45	1,545	132	1,677	998	330	1,328
King's	61	..	..	..	1,075	369	1,445
Annapolis	55	1,478	292	1,770	1,830	357	2,187
Digby	49	1,079	109	1,188	921	305	1,226
Yarmouth	62	..	..	..	1,276	282	1,558
District of Shelburne	18	416	30	446	320	129	449
District of Barrington	24	508	65	573	358	153	511
Queen's	30	658	33	691	510	230	740
Lunenburg	53	1,384	180	1,564	1,139	401	1,541
Cumberland	55	1,698	98	1,796	1,589	348	1,937
Cape (Cape Breton)	47	1,615	156	1,771	1,019	315	1,334
Breton { Richmond	22	539	73	612	447	294	741
Island { Inverness . . . . .	..	..	..	..	..	386	—
Total	755	18,949	1,896	21,339	17,484	5,749	22,847
Combined Grammar and Common Schools	42	1,603	151	1,894	2,883	1,620	4,365
Grand Total	797	20,552	2,047	23,233	20,367	7,369	27,202

Sound education is of great importance for the preservation of the unity of the British empire; by instruction based on Christian principles, angry passions are softened, prejudices allayed, virtuous tendencies strengthened, and self-improvement promoted. An industrious, moral, and contented people are more easily governed and retained

in allegiance to sovereign rule than an ignorant and semi-civilised race, whose passions and prejudices render them the tools of any designing demagogue. It is therefore the true policy of England, to diffuse among her people the knowledge of their actual condition, to enable them rightly to appreciate their privileges and fulfil their duties.

The amount of the grants from the revenues of the province for the above schools, and for the colleges and academies in Nova Scotia and Cape Breton was £11,998, distributed as follows:—

Dalhousie College	£400
King's College, Windsor	400
St. Mary's College	444
Acadia College	444
Sydney Academy	200
Academy at Port Hood	100
Instruction of the Indians	300
Unincke's Schools, Halifax	100
Wesleyan Schools, Halifax	100
African Schools, Halifax	100
Infant Schools, Halifax	50
Infant Schools, Pictou	50
School in Poor-house, Halifax	25
Grammar School, Halifax	150
National School, Halifax	150
Roman Catholic School, Halifax	80
Academy at Yarmouth	135
Ditto Lunenburg	100
Ditto Annapolis	75
Albion Academy at Annapolis	25
Academy at Colchester	100
Ditto Cumberland	100
Ditto Sydney	100
Ditto Guysborough	100
Ditto Cape Breton	100
Ditto Inverness	100
Ditto Richmond	100
Ditto Digby	100
Ditto Shelburne	100
Ditto Queen's County	100
Acadia School	100
St. George's School	100
Combined Common and Grammar Schools	1,620
Common Schools	5,749
Total	£11,998

By the Common School Act of 1826, the province is divided into districts, in which the people appoint their own trustees, and manage their schools on a popular basis, controlled only by Boards of Commissioners, appointed by the executive. This Act is subject to the revision of the legislature every three or four years. There is an excellent Mechanics' Institute at Halifax, and similar useful institutions in different parts of the province.

There are four collegiate institutions in the province. King's College, at Windsor, was founded in 1802, under a royal charter, his grace the Archbishop of Canterbury being the patron. The Lieutenant-Governor, the Bishop of Nova Scotia, and other provincial officers, form a Board of Directors. The statutes of the college are similar to those of Oxford, but religious tests in regard to graduates have been removed many years. The institution is under the immediate management of a president, with a salary of

£312. A professor of mathematics, natural philosophy, and astronomy, with a salary of £176; and a lecturer in modern languages and literature, with a salary of £100. There are 22 students; and in connection with the college is an academy or preparatory school, with about 23 scholars. The college is supported by temporary annual grants from the Society for the Propagation of the Gospel, and the Society for Promoting Christian Knowledge, amounting to £900 sterling in 1844, and by an allowance of £400 sterling, per annum, granted by a permanent Act of the Provincial Legislature.

Dalhousie College, at Halifax, has three professorships.

Acadia College, at Horton, was incorporated by Act of the Legislature in 1840, and is under the control of the Nova Scotia Baptist Education Society. There are three professors, and 21 students.

St. Mary's College, or seminary at Halifax, was established in 1841, and is under the control of the Roman Catholic body. There are four professors, one teacher, and 40 students.

As the different colleges are connected with different interests, and evince a sectarian rivalry, prejudicial to sound learning and the spirit of Christianity, endeavours have been made by the Earl of Dalhousie and Sir James Kempt, to procure an union of the colleges, so as to form one establishment, and place the higher branches of education on a more permanent foundation. Lord Glenelg, Lord Stanley, and other colonial secretaries, strongly recommended the measure, which has not yet, however, been carried into effect.

Religion.—The Established Church is under the direction of a bishop and an arch-deacon. In 1847 there were 35 clergymen, whose incomes varied from £150 to £250 a-year, with, in most parishes, a parsonage house and a glebe of 300 to 600 acres. The diocese of Nova Scotia was created in 1787. The Nova Scotia "Blue Book" for 1847 (which is very defective, compared with the full details given in the Blue Books of other colonies) does not state the number of ministers of Presbyterian, Roman Catholic, and other denominations.

It is difficult to state the number of ministers of the Presbyterian Church, as they are divided into several synods. The synod of Nova Scotia, "in connection with the Established Church of Scotland," had, in 1848, three ministers; the synod of Nova Scotia

"adhering to the Westminster standard," about 12 ministers in Nova Scotia and Cape Breton; the "Presbyterian Church of Nova Scotia" about 26 ministers; the "Wesleyan Missionaries in Nova Scotia and Cape Breton," number about 20; the "Evangelical Lutheran" and the "Universalist" churches, each one minister; the "Baptist ministers" are in number 49; the "Free Christian Baptist ministers" are nine; the "Free-Will Baptist ministers," seven, and two missionaries to travel through different parts of Nova Scotia; the "Free and Sovereign Grace Baptists" have one minister; the "African Baptist Church," one; and the "African Episcopal Methodist Church," one. The Roman Catholic church has two dioceses in the province, one for Nova Scotia and the other for Cape Breton. The bishop of Halifax has under him a vicar-general and 13 priests. The bishop of Arichat (Cape Breton) a vicar-general and 19 priests.

The different churches are sustained by those who take an interest in them; and religious distinctions are happily attended with few inconveniences. There are in the province a Diocesan Church Society, a Bible Society, Naval and Military Society, a Wesleyan Methodist Missionary Auxiliary Society, a Baptist Education Society, a Board for Foreign and Domestic Missions, a Lay Association in support of the Church of Scotland, St. John's Church Young Men's Religious Association, a Halifax Bethel Union, a Pictou Auxiliary Bible Society, and a Seamen's Friend Society.

Of *charitable societies* there were also, in 1848, a Nova Scotia Philanthropic Society, a "Youths'" ditto, St. George's, Charitable Irish, Juvenile Charitable Irish, Highland, and North British societies. A Halifax Dispensary, an African Friendly, and African Abolition Society. Of *temperance societies* there are the Halifax, the Halifax Female, Dartmouth, St. Mary, and St. Patrick's societies; Halifax Young Men's, and the Pictou Total Abstinence societies; and the Sons of Temperance.

The Roman Catholic bishop took the temperance pledge publicly, and then administered it to many of his congregation. Some of the temperance processions number 400 members. Great good has been effected by these valuable institutions. Of *masonic lodges* there are 13 in Nova Scotia, and one in Cape Breton; and of the "*St. John's Priory of Knights Templars and Appendant Orders, holden of the Supreme Grand Con-*

clave of Scotland," of which Lord Glenlyon is the grand master, and the Earl of Dalhousie the grand seneschal, there are three, viz.—the St. Andrew's Royal Arch Chapter, the Thistle, and the Acadia.

Crime.—The "Blue Book" for 1847, reports a nearly total absence of crime, and that there are no debtors in the prisons.

Finances.—The revenue derived from taxes, viz., customs, excise, light dues, and incidental, was, in 1832, £47,299; in 1836, £49,466; in 1846, £82,776. No part of the revenue of the province is derived from direct taxes. The customs duties are levied under the authority of the Act of the Imperial Parliament 8 and 9 Vic., for regulating the trade of the British possessions abroad, and the Acts in amendment thereof. The amount of those duties collected at the custom-house, and paid into the provincial treasury for the year ending 5th January, 1847, was £29,251 sterling. The colonial impost duties levied by authority of an Act of the Provincial Legislature, passed 31st March, 1846, yielded in 1847 £43,531.

The *total* revenue collected in 1847 was, *fixed* customs, £29,251; colonial imposts, £43,531; light dues, £3,318; total, £76,101; *incidental*, £6,676, including £4,760 received from savings' bank, proceeds of bills of exchange, &c.; *receipts in aid of revenue*, £18,569, including amount of bills drawn by the collector of customs on the Receiver-general in England, £3,448; stipends of clergymen of Nova Scotia paid from the military chest, £3,062; deducted from post-office revenue, £6,502; bills drawn by bishop and archdeacon on her majesty's treasury, and by clergymen on the Society for Propagating the Gospel, £4,700; *casual and territorial revenue*, £9,678, including rent and proceeds of her Majesty's coal mines in Nova Scotia and Cape Breton, £5,714; sales of crown lands, £3,408; fees, £549. The total receipts obtained in 1847 were, therefore, £111,025. The population of Nova Scotia and Cape Breton (in round numbers) is 300,000, and the taxation about £110,000 a-year, the sum contributed by each individual in the colony is only *seven shillings* per annum.

The tariff for 1847 was fixed by the legislature of Nova Scotia as follows:—Anchors, cables, ashes, barley, beans, books, coal, coin, copper wrought or cast, corn, fish, oil, flax, furniture (working tools belonging to emigrants for use), hemp, hides, horns, iron, wrought, cast, &c., machinery, nets, ores,

palm oil, pitch, plate, rags, rice, rosin, sails, salt, seeds, skins, sugar, maple, tar, tobacco unmanufactured, tow, turpentine, whalebone, —all admitted *duty free*. The duties on some of the other principal articles imported were, on candles—tallow, 1*d.* per lb.; wax, &c., 3*d.* per lb.; chocolate or cocoa paste, 1*d.* per lb.; coffee, 4*s.* 4*d.* per cwt.; clocks under 20*s.* value, 5*s.*; others, 10*s.*; materials for clocks 20 per cent. on value; leather, sole dressed, 1*d.* per lb.; ditto upper, $\frac{1}{2}$ *d.*; boots and shoes 10 per cent. on value; spirits made within the province, 1*s.* 4*d.* per gal., except rum, which is charged with 7*d.* per gal.; spirits imported, 1*s.* 8*d.* per gal.; sugar, bastard, 4*s.* per cwt.; crushed, 6*s.* per cwt.; refined, 8*s.* per cwt.; muscovado, 2*s.* per cwt.; tea, black, $1\frac{1}{4}$ *d.* per lb.; gunpowder, 3*d.* per lb.; tobacco manufactured, $1\frac{1}{2}$ *d.* per lb.; wines, 1*s.* 3*d.* to 2*s.* 6*d.* per gal.; manufacture of wood, 10 per cent.; all other goods, wares, and merchandize, 5 per cent.

The light dues yielded in 1847 £3,318, and are levied at the rate of 4*d.* per ton on every vessel cleared at any custom-house in the province, and on every vessel coming into any port or place in the province from any port or place out of the province. A certificate of these dues being paid, exempts a vessel from any further payment to the 31st March following the date of the certificate. By means of this fund, which is held sacred to the building and maintenance of light-houses, and liberally supported by Canada, New Brunswick, and Prince Edward Island, 20 light houses are in full operation, under the management of a board of commissioners.

About £10,000 a-year is locally levied in direct taxation for the support of the poor, and county charges. Every adult is compelled to perform statute labour on the roads; but this labour may be commuted by a money payment, if preferred. Roads and bridges are maintained by this contribution, in aid of which the legislature grants an annual sum, which has risen as high as £35,000, and seldom falls below £25,000 a-year.

The expenditure of Nova Scotia in 1847 was, civil establishment, £12,166; customs, £9,462; judicial, £5,688; ecclesiastical, £7,662; legislature, £3,745; militia, £600; pensions, £920; roads and bridges, £30,863; education, £11,182; navigation security, £4,576; bounties, £20; postal communication, £7,163; humane establishment on

Sable Island, £2,156; famine relief for Ireland and Scotland, £1,000; penitentiary, £1,160; repairs of public buildings, £1,593; principal and interest of funded debt, £9,762; other miscellaneous disbursements, £12,595; total in 1847, £122,222; and in 1846, £109,905.

The salaries are, lieutenant-governor, £3,500; provincial secretary, £1,000; treasurer, £480; commissioner of crown lands, Nova Scotia, £500; in Cape Breton, £332; collector of colonial duties, £560; deputy post master, £500; surveyor-general, £150; private secretary to governor, £250. *Law*: chief justice, £1,000; four puisne judges, £2,510; master of the rolls, £650; attorney-general, £600; solicitor-general, £100. *Ecclesiastical*: bishop, £2,000; archdeacon £300.

Legislature.—Legislative Council expenses, £575; speaker of House of Assembly, £160; pay of members of the House of Assembly and travelling expenses, £2,096; clerk of the House of Assembly, £240; assistant clerk to the House of Assembly, £160.

The bishop of Nova Scotia has £2,000 a-year; the archdeacon, £300; and there are from 28 to 30 clergymen; missionaries of the Society for Propagating the Gospel, with salaries varying from £150 to £170 per annum. The Ecclesiastical charge for 1847, was £7,662. Paid by Great Britain.

£1,840 is voted towards steam commissions, viz., between Pictou and Quebec, £500; Pictou, Prince Edward Island, and Cape Breton, £340; Halifax and Yarmouth, £500; and £500 to the "North America," which plies between Halifax and Newfoundland.

The "Blue Book" for 1847 gives the following recapitulation of expenditure (shillings and pence excepted):—

Establishments.	Paid by Great Britain.	Paid by Colony.
Civil Establishment . . .	£4,407	£3,200
Contingent Expenses . .	2,648	2,009
Legislature		3,745
Judicial Establishment . .	2,480	2,480
Contingent Expenses . .	45	683
Ecclesiastical Establishment	7,662	
Military		695
Customs	9,383	80
Miscellaneous Expenses . .	7,987	73,792
Pensions	200	720
	£34,815	£87,406
Total . .	£122,221.	

In the year 1847 the public debt of the province was £77,750, of which sum about £50,000 was in circulation as paper money, under the guarantee of the provincial government.

The colonial expenditure for the year 1846-47, on account of Nova Scotia, Cape Breton, New Brunswick, Prince Edward Island, and Newfoundland, is stated in a parliamentary return, dated 20th April, 1849, to be as follows:—Military expenditure, £170,464; civil expenditure, £12,077; naval expenditure, £2,115; total, £184,656.

The expenditure incurred by Great Britain for military protection, and in aid of the civil establishment was, in 1847, as follows:—Supplies for rations of provisions and forage, £8,709; fuel and light, £2,636; regimental and staff pay, £31,261; land and water transport contingencies, &c., £5,765; total (shillings and pence excepted), £48,374; military works of defence, £14,046; subsistence royal engineers, £1,815; subsistence royal artillery, £3,848; ordnance establishment, £1,947; barrack establishment, £2,752; barrack supplies, £317; wages, £1,408; = £26,136. In aid of the civil establishment, stipends for missionaries, £3,062; grand total, £77,572. The above is the total expense defrayed by the commissariat chest for the services stated; but many officers of the line receive their pay through their agents in London. The troops do not receive any advantage from the colony, except marching-money. The amount of bills drawn during the year 1847, was £104,979.

Commerce.—The geographical position of Nova Scotia, its fine harbours, and the maritime character of the people—to whom the sea is a familiar object from childhood, and,

“Who turn what some deem danger to delight,”

all indicate that this almost insulated province is eminently adapted for a commercial emporium. Sir John Harvey, in his Report to Earl Grey with the “Blue Book” for 1847, says:

“The farmers’ sons in the midland counties, where ship-building is also carried on, become shipwrights, mariners, or masters of coasters and plaistermen, just as the prospects of advantage are presented, or accident may give a bias to the mind. Further east the coal trade, the supply of West India produce to Canada or of agricultural productions to Newfoundland, offer to the enterprising their peculiar attractions. The west has its grindstones, cordwood, and other articles, to convey to the United States; and on the southern sea-board the coast and deep sea fisheries people the rugged caves and inlets which indent it

with a hardy race, to whom farming and gardening are but the amusements of an idle hour, whose homes and whose occupations are on the sea. An active coasting trade springs naturally in a country so situated, it becomes intercolonial almost as soon as it is generated; as in some cases only a narrow strait or arm of the sea divides one colony from another, while the supply of the British West Indies very early attracted towards those islands from Nova Scotia an extensive trade in fish and lumber.

“Prior to 1824 the foreign trade of Nova Scotia was very limited, but the changes in the commercial policy of the empire, suggested and carried through by Mr Huskisson, opened a wider field for colonial enterprise, of which the North Americans were not slow to avail themselves. With every relaxation yielded by the Imperial Parliament the foreign commerce of the colonies has attained a further development, and Nova Scotia vessels, besides their traffic with the neighbouring states, Canada and the West Indies, now trade to the Baltic, the Mediterranean, China, the Mauritius, the East Indies, the Brazils, the Havanah, and our merchants and mariners are fast acquiring an accurate acquaintance with distant seas and with foreign markets in every part of the world.

“Carrying out the policy suggested in your Lordship’s despatch of 31st December, 1846, and co-operating under the auspices of Lord Elgin, the Colonial Legislatures have adopted measures for establishing among the northern group a free inter-colonial trade, only modified by considerations which touch sources of revenue already pledged for indispensable fiscal obligations.

“One further change is now anxiously desired and as confidently anticipated. It is the realization of that policy, suggested in the correspondence between Lord Palmerston and Mr. Bancroft, for an unrestrained reciprocal commerce between Great Britain and the United States, and the repeal of the Navigation Laws. Such measures would give a stimulus to the trade of all those colonies; and their population would gladly welcome American vessels into their rivers and bays, provided the whole continent south to Mexico were open to their tonnage; and if their fish, timber, deals, coal, and agricultural productions were admitted on equally favourable terms into the ports of the United States. Negotiations have been suggested, I believe, between the governments of Canada and Washington on the basis of the Bill recently introduced to Congress by Mr. Grinnell, and Nova Scotia would cheerfully avail herself of any advantages which Canada may thus secure.”

The trade between Nova Scotia and Great Britain has, for some years, been almost stationary, especially as regards imports from the parent state. The exports of the province have largely increased between 1827 and 1847, especially as regards the commerce of the West Indies and North America. The total value of the exports was nearly quadrupled in 20 years; and the shipping employed was increased in about the same proportion. If the government of the United States granted reciprocity of trade to British America, Nova Scotia would be materially benefited by such an act of justice.

The trade of Nova Scotia and Cape Breton with different countries, will be seen by the following returns for the years 1847 and 1827 :

Imports, Exports, Shipping.	Great Britain.	British Possessions.			United States.	Foreign States.	Total.
		West India.	North America.	Elsewhere.			
<i>Imports in 1847—</i>							
Nova Scotia—value . . .	£326,726	£28,850	£177,040	£1,469	£300,418	£169,984	£1,004,487
Cape Breton „ . . .	4,189	—	10,550	2,641	8,965	1,112	27,468
Total Imports in 1847 . .	£330,915	£28,850	£187,590	£4,110	£309,383	£171,106	£1,031,955
Ditto in 1827 . .	£307,907	£190,309			£312,603		£810,819
<i>Exports in 1847—</i>							
Nova Scotia—value . . .	£68,217	£201,808	£207,808	£5,467	£258,281	£31,630	£773,211
Cape Breton „ . . .	3,587	607	29,196	1,120	16,669	6,679	57,866
Total Exports in 1847 . .	£71,804	£202,415	£237,004	£6,587	£474,950	£38,309	£831,071
Ditto in 1827 . .	£121,617	£107,738			£36,922		£267,277
<i>Shipping in 1847—</i>							
Nova Scotia	Tons. 63,370	Tons. . .	Tons. 123,909	Tons. . .	Tons. 174,406	Tons. 5,773	Tons. 367,458
Cape Breton	3,679	. .	25,615	. .	18,679	1,032	49,005
Total Tonnage, in 1847 .	67,049	. .	149,524	. .	193,085	6,805	416,463
Ditto in 1827 . .	22,615	. .	100,324	. .	10,874		123,813
Increase	44,434	. .	49,200	. .	189,016		282,650

The principal imports at Nova Scotia in 1847, from Great Britain were, dry goods, £81,128; cordage, £23,516; chain cables, £7,249; canvass, £3,319; earthenware, £6,084; books and stationery, £3,401; glass, £6,173; hardware, £12,011; hats or caps, £2,565; iron and castings, £27,990; indigo, £2,125; nets and lines, £7,385; nails, £5,985; linseed oil, £3,425; paint, £4,584; iron pipes, £2,893; tea, £53,987; sugar, £5,075; salt, £13,347; soap, £5,740; stores, £2,082; wine, £4,461; brandy, £10,721; Geneva, £5,715.

The imports at Cape Breton were in proportion to those of Nova Scotia. The exports to Great Britain, from Nova Scotia, consisted chiefly of—flour, £8,079; corn, £3,201; meal, £5,433; lumber and timber, £35,200. Fish was exported to the West India colonies to the value of £117,000; and lumber, £35,000. To the United States, the Nova Scotia colonists exported fish in 1847, to the value of £160,700; grindstones, £13,221; gypsum, £6,746; unrefined sugar, £8,668; firewood, £6,132; and coal, £12,000. To foreign states, they exported fish to the value of £30,000.

The grindstones exported amount to 1,500 tons—42,000 pieces. The value of the grind-

stones raised in Cumberland County, in 1847, was £13,221. The gypsum exported, 25,000 tons. Coal exported from Nova Scotia, 75,000 chaldrons; and from Cape Breton, 32,000 chaldrons. Salt-springs exist in the neighbourhood of Mount Thom, in the County Cumberland, from which salt has been made. These springs are numerous in the eastern section of the province. Eight miles N. of the town of Pictou is a bed of copper ore, intermixed with majestic trees, which have been converted into coal, but still retain their natural form and external appearance; and in some instances, the vegetable fibres of the wood, impressions of the leaves, bark, and all those figures so common on the surface of the living plant. Sometimes the whole tree has been transformed into lignite; in other instances only a partial change has been effected, and the ancient herbage of a productive climate is now half stone, half coal, intermixed with green carbonate of copper, forming a beautiful efflorescence in their delicate crevices.

The Albion coal mines at Pictou, in Nova Scotia, yielded, in 1828, 4,467 chaldrons; in 1831, 8,345 chaldrons; in 1833, 19,890 chaldrons; and in 1847, 35,104 chaldrons; value £42,123. The strata is similar in

formation to those of the Staffordshire coal-fields. The Sydney mines, at Cape Breton, yielded, in 1847, 26,061 chaldrons, Newcastle measure; value £37,528. The Bridgeport mines, 68 chaldrons, 18 bushels, Newcastle measure; value £98 12s. 2d. The Cape Breton coals are similar to those of Newcastle, in England.

His late Royal Highness the Duke of York obtained from the crown in 1825, a lease for sixty years of all the mines and minerals of every description in Nova Scotia and in Cape Breton, excepting those contained in lands previously granted, where the crown had not reserved the minerals. This right was subleased to the "General Mining Association," at a fixed rent of £3,000 per annum. The operations of this association commenced in the year 1827, and have hitherto been confined to the working of coal-mines and the discovery of iron ore. The coal-mines worked in Nova Scotia are those termed the *Albion*, on the banks of the East River, in the district of Pictou, distant eight and-a-half miles from the town of that name. A railroad has been constructed from the mines to the port of shipment, as the East River is not navigable for burthensome craft to within six miles of the mines. The coal is raised from several shafts by the aid of steam and winding engines. The establishment at the mines consists of about 200 persons, employed in the mines, the foundry, railroad, barges, brick-kilns, &c.; and the town of New Glasgow owes its birth to the presence and operations of the General Mining Association. It is right, however, to state, that some of the colonists complain, that the mineral wealth of the province has been granted to the creditors of the late Duke of York, and the riches which would have materially benefited their country, and contributed to their public revenue, are abstracted for the benefit of a few individuals. The General Mining Association have, however, as far as practicable, lessened the evil of the grant by the application of English money to the working of the mines. Its capital, £400,000, divided into 20,000 shares, of £20 each, has been applied to the operations in Nova Scotia.

The Report to her majesty's government, for 1847, contains the following account of the state of manufactures in the province:—

"The manufactures of Nova Scotia are, as yet, of an extremely simple and unpretending character.

Coarse cloths, or homespuns, woven by the wives and daughters of the peasantry, are made in all the settlements, and are generally worn by that class; the more affluent dressing in English broadcloth only on the Sabbath. Some of these home fabrics are of handsome patterns. Fulling-mills exist in the older townships, in which this cloth is thickened and dyed. Where these are too distant the dyeing is a simple household process. Sheep are kept on every farm, and supply the raw material. Coarse flannel for under garments, bed linen, woollen blankets, and carpets are also made. Flax grows luxuriantly; but hand-spun and woven is not considered profitable, the British article finding its way into the province at prices so low. Power-looms are unknown here. Tanning, to the extent of the preservation of all the hides grown in the country, and of those occasionally imported from South America, is also practised. The yards are not extensive, except in the neighbourhood of the capital (in some of which steam power is used), and many farmers tan their own leather in hogsheads sunk by the road-side, or in pits of the simplest construction. Leather is imported occasionally from Canada, and sheepskins and wool are exported to the United States.

"Saw-mills are numerous; but the extensive and costly establishments, common to Canada and New Brunswick, do not exist in Nova Scotia, as we have not the pine forests to sustain them; but all the lumber required for the construction of buildings, and of ships and vessels for the supply of our own commerce or for exportation, is sawed within the country. Pine lumber is extensively shipped from the eastern ports to Newfoundland, from the western to the West Indies, forming a deck load for vessels carrying out fish. Plank and deals are also manufactured for exportation to the mother country, and, of late, sleepers for railroads have been in some demand. Occasional cargoes of ton timber are also shipped; but this branch of trade, never very profitable to individuals or advantageous to the country ere the forests had receded before the progress of cultivation, is less so now, and has been almost abandoned.

Of iron manufactures for exportation, except stoves to some of the colonies, and chain cables to the United States, there are none. Forges, however, are found in all the villages and hamlets, and are numerous in the larger towns. These supply iron-works for mills, ship-building, agricultural carriages and implements, and shoes for cattle. Stoves are imported from the Carron works of Canada and the United States, and iron manufactures of all kinds are largely imported from the mother country. The iron-mines of Nova Scotia are not worked, for want of capital. An experiment was tried at Moose River some years ago, by a company, whose skill and knowledge were not equal to their enterprise. The capital was sunk, and the work abandoned.

"Leather, to the extent of the whole quantity tanned in the country, is manufactured every year. Little is ever exported, while some comes in from England, Canada, and the United States. Boots, shoes, saddlery, and harness, are made up in all the towns and villages, but the supply (of the quantity and at the prices to compete with imported articles) is not equal to the demand, England and the United States largely supplying the market, injuring it may be, for a time, but ultimately stimulating and improving the domestic manufacture.

"Household furniture, carts, carriages, ploughs, and other agricultural implements, buckets, fish-

barrels, and boxes, are made in great quantities, and various manufactories of wood flourish in Nova Scotia, and yield profitable employment to those who conduct these branches of business.

"Tobacco, confectionery, printing, and wrapping paper, hats, and some other articles are manufactured in the neighbourhood of Halifax, where are also several distilleries for the preparation of spirits from molasses. Bonnets of bleached grass, and hats of straw, are made in many of the rural districts. Buildings are of wood almost universally. Some good stone and brick houses are to be seen in Halifax, and the other larger towns, but these form exceptions to the general rule. Stone houses carelessly built are apt to be damp in this climate; a prejudice against them is in consequence generally entertained, which, added to the low price of lumber, gives wood the preference, and may for the next 20 years. But, as wood becomes scarce, more permanent structures will take the place of those usually decaying, or liable to destruction by fire. Stone for building materials, abounds in Nova Scotia. Granite of the finest quality, on the south coast, is inexhaustible. Freestone is found all along the northern shore, and slate quite equal to that of Wales in the central region."

There are no means of obtaining correct returns with regard to the fisheries, as the fishermen are not bound to take out shipping papers, and very few of the small shallops are registered. In 1837, the dry fish exported was 176,156 quintals; pickled fish, 47,693 barrels. In 1847, according to the Blue Book, the quantity of dry fish exported from Nova Scotia Proper was 224,859 quintals, value £78,600; pickled fish, 206,911 barrels, 82 tierces, 5,816 half barrels, and 4,848 kits, value £120,753; 2,089 boxes smoked herrings, value £1,506. Total for Nova Scotia, value £200,859. For Cape Breton, 56,312 quintals dry fish, value £24,419; 2,985 barrels mackerel, value £17,200; 335 barrels herrings, value £1,492; 335 barrels salmon, value £670; 12,399 barrels pickled fish, value £10,124; seal skins, £840; oil of all kinds, £8,300. Total, £63,045.

The official Report for 1847 states, that around the shores of the Basin of Mines and Bay of Fundy, great quantities of shad and bass are caught in weirs, at every flux and reflux of the tide. The Basin of Annapolis has a fishery peculiar to itself, of small herrings caught in weirs, which are smoked and packed in boxes. These are much prized, and find a ready sale in foreign markets.

The cod and haddock fisheries are actively prosecuted all along the southern coast; these fish are found in deep water very near the shores, but the principal catch is taken on the banks about ten miles off, the poorer fishermen rowing or sailing out in their whale-boats, and returning every night.

Small decked vessels are fitted out by those who are able to keep them, and these generally remain on the grounds till they have completed their lading. The Nova Scotians also participate in the Gulf and Labrador fisheries, and pay occasional visits to the banks and shores of Newfoundland. The export of cod-fish, in 1847, was 313,822 quintals, valued at £125,442 sterling.

In spring the shoals of mackerel, making their way from the south to the north, and returning in the fall, glide along the coasts and headlands of Nova Scotia, and penetrate into the coves and inlets, where immense quantities of them are caught with seines, and hauled on shore; 500 barrels are by no means an uncommon draught, and 1,000 are sometimes taken. In the autumn of 1846, mackerel were taken in such abundance, that it was difficult to procure salt and barrels for their preservation. Mackerel are also taken in nets all around the shores.

Herrings are caught at times in great quantities. The following return for 1847 will give an idea of the pickled fish trade, which is annually becoming of more importance, and which, were the markets of the United States thrown open to Nova Scotia, is capable of almost indefinite extension:—

From Nova Scotia Proper.—Alewives, 6,793 barrels, 31 kits; herrings, 22,043 barrels, 433 half barrels, 150 kegs, 353 thirds of barrels; mackerel, 186,406 barrels, 5,078 half barrels, 295 quarter barrels, 3,187 thirds of barrels; salmon, 388 tierces, 5,101 barrels, 305 half barrels, 413 thirds of barrels, 450 kits.

From Cape Breton.—32,919 barrels, valued at £29,486 sterling.

The attempts to prosecute the whale fishery have not yet assumed a permanent character, or been attended with success.

The Blue Book for 1847 states the number of ships built in Nova Scotia Proper at 221; tonnage, 25,927; and at Cape Breton, 31; tonnage, 3,521.

The vessels registered in the province in 1844 were—

	Under 50 Tons.		50 Tons and upwards.	
	No.	Tonnage.	No.	Tonnage.
Nova Scotia .	1,258	35,860	632	68,086
Cape Breton .	324	10,146	132	9,296
Total . .	1,582	46,006	764	77,382

Property annually created.—Adopting the





QUEEN ANNE

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FROM THE ORIGINAL BY JUNGLE IN THE COLLECTION OF

THE R^H HON^{BLE} THE EARL OF EGREMONT

principles laid down relative to Canada (p. 155), it may be estimated that 300,000 inhabitants of Nova Scotia and Cape Breton require each for their daily support one shilling a-day, or about £18 a-year = £5,400,000. The property annually created and not consumed, may average three-pence a-day, or £4 10s. a-year = £1,350,000; total annually created about *seven million sterling* (£6,750,000).

Movable and Immovable Property.—Land under regular cultivation about 400,000 acres—average value £10 per acre = £4,000,000; half cultivated and partly cleared, 600,000 acres, at £2 an acre = £1,200,000; uncleared, forest and wild land, 5,000,000 acres, at 5s. an acre = £1,250,000. Houses about 60,000, at £20 each = £1,200,000. Furniture, &c., about £20 for each house = £1,200,000. Apparel and personal property, each person, £4; for 300,000 inhabitants, £1,200,000. Manufactories, distilleries, &c., about £100,000. Government buildings, forts, churches, colleges, schools, gaols, &c., £1,000,000. Roads, canals, bridges, wharfs, dykes, &c., £2,000,000. Mines, quarries, forests, and fisheries, £5,000,000. Horses, £250,000; horned cattle, £800,000; sheep, £250,000; swine and poultry, £150,000. Ships and boats, £100,000. Merchandise and cash in hand, £1,000,000. Total estimated value of movable and immovable property in Nova Scotia and Cape Breton, £20,700,000.

Banks.—Three corporate institutions, viz., the Halifax Banking Company, the Bank of Nova Scotia, and a Branch of the London Bank of British North America.

Coins.—The Queen's duties are commonly paid in dollars at 4s. 2d. sterling, or doubloons at £3 4s. sterling each, or in British silver coin. The English shilling is by law equal to 1s. 3d. currency; the former value of the quarter dollar, which it has displaced, and the sovereign and the doubloon are made legal tenders at 25s. and £4 currency respectively, and the dollar at 5s. 2½d. There are no provincial coins, except copper pence and halfpence. The amount of coin in circulation cannot be ascertained.

Paper Money.—The notes of the Provincial Treasury in circulation on 31st December, 1847, were £47,974. The notes of the Bank of Nova Scotia in circulation, £50,000; notes of the Bank of British North America, £48,000; notes of the Halifax Banking Company, about £42,000; total paper currency, £187,974.

Accounts are kept in "Halifax currency." The pound currency is equal to 16s. sterling—thus £125 currency = £100 sterling. To reduce to currency *add* one-fourth; to bring currency into sterling *deduct* one-fifth.

Weights and Measures.—The same as in England.

Course of Exchange in 1847.—Bills on her majesty's government at 30 days' sight, 14 per cent. Private bills at 60 days' sight, 13 per cent. Bills on the United States, 5 per cent. premium.

Average Prices of various produce in Nova Scotia in 1847:—Wheat, per imperial bushel, 4s. 10d.; wheaten flour, per barrel of 196 lbs., 27s.; wheaten bread, per 2 lb. loaf, 3d.; horned cattle, £8 to £10; horses, £12 to £30; sheep, 10s. to 20s.; goats, 16s. to 32s.; swine, per lb., 3d. to 3½d.; milk, the quart, 3d.; butter, fresh, 9d. to 10d. per lb.; cheese, 6d. to 10d. per lb.; beef, 3d. to 6d. per lb.; mutton, 3d. to 6d. per lb.; pork, 3d. to 4d. per lb.; rice per 14 lbs., 2s. 10d.; coffee, 7d. per lb.; tea, 1s. 8d. to 2s. per lb.; sugar, per 16 lbs. 4s.; salt per bushel—coarse, 1s. 7d.; fine, 4s. per bushel; wine, 4s. to 10s. per gal.; brandy, 8s. per gal.; rum, 3s. 6d. to 4s. per gal.; beer, per 5 gals., 4s. to 6s.; tobacco, 10d. per lb.; coal, 20s. to 25s. per chaldron; mackerel, per barrel, No. 1, 20s. to 25s.; herrings, 11s. per barrel. The price of food is regulated partly by the state of the crop, and partly by the prices of bread-stuffs in the neighbouring republic, whence the supplies which Nova Scotia requires are drawn. The supply of fish also influences the price of other articles.

Wages for Labour.—*Domestics*, per annum with board, £10 to £16; females, 10s. to 15s. a month. *Predial*, 2s. 6d. to 3s. per day. Tradesmen, 4s. to 6s. per day. These figures are from the "Blue Book" for 1847; they differ in some respects from the Report of the governor to Earl Grey, dated 18th October, 1848, which is as follows:—

"The price of labour varies slightly in Nova Scotia with the price of food. 2s. 9d., and 3s. 3d. sterling per day, is paid generally by government on the public roads, upon which farmers, and farmers' sons, who have other pursuits, are chiefly employed. The rates will almost always command labour in the towns and villages, in which, however, it sometimes falls to 2s. and 2s. 9d. sterling. Farm servants receive £20 currency per annum, and their board; first-rate men in the harvest time will earn £2 18s. sterling per month; captains of merchant vessels receive £8 sterling per month; sailors £3 4s. sterling per month; mechanics are generally in demand, and can in ordinary seasons, earn from 4s. to 8s. sterling per day."

Post Office.—Branches extend into every settlement.

Steam Conveyances.—The fine line of mail steam packets originated by the enterprising Mr. Cunard, of Nova Scotia, leave Halifax weekly for England, the United States, and Bermuda. There are weekly steam-boats to Cape Breton and Newfoundland. There is also steam intercourse between Halifax and St. John's, New Brunswick, including the intervening ports along the western shore; and between Windsor, Annapolis, and St. John's, on that side of the province washed by the Bay of Fundy. A steam-boat plies in the Bras d'Or Lake, Cape Breton, and occasionally there is another between Pictou and Prince Edward Island. Lines of stage-coaches run thrice a-week from Halifax to Pictou and Annapolis.

Railroads.—One rail has been laid down in Nova Scotia for the conveyance of coals from the Pictou mines to the loading ground. There are several proposed routes for a trunk line of railway from Halifax to Quebec: 1st. From Halifax to Windsor, 45 miles; Annapolis, 85; to entrance of Bay of Fundy, thence by a steamer to St. John's in New Brunswick, 45; St. John's to Fredericton, 65; to Woodstock, 62; to Grand Falls, 71; to Rivière du Loup, 106; to Quebec, 110; total distance by the St. John River from Halifax to Quebec, 600 miles. This is a mixed route by railway and steam-boat. 2nd. By the Bay of Chaleurs route, 635 miles. 3rd. The "direct route" from Whitehaven Harbour near Canso, at the N.E. extremity of Nova Scotia, to Pictou, along the coast to Bay Verte, and through the centre of New Brunswick, 652 miles. 4th. This route combines the line through Nova Scotia from Halifax, and the direct route through the centre of New Brunswick, 595 miles. 5th. The Whitehaven route through Nova Scotia, with the Eastern or Bay Chaleurs route through New Brunswick to Quebec, 692 miles.

Admiral William Fitzwilliam Owen, who is considered the ablest surveyor in the royal navy, made a survey by order of government, of the proper port for the junction of sea and land communication between Great Britain and British North America, with reference to the projected railway from Nova Scotia to Canada. Having satisfied himself that the port of Canso was ineligible, although less than 2,000 miles from the W. coast of Ireland, the admiral, after examining other havens, gave his opinion in favour

of Whitehaven, in lat. 45° 10' N., long. 61° 10' W., 130 statute miles N. E. of Halifax. The report of Admiral Owen contains the following account of Whitehaven:—

"We found this haven to be a splendid and convenient port, as capacious as Halifax Harbour, between George's Island and Bedford Basin, and as safe and commodious, and its approaches safe, and under any circumstances easily attainable from the open sea, and within the extreme points of perfect shelter and security, not being more than a mile of pilotage water; but the shaft or channel to the haven itself, although well sheltered and safe, yet is very narrow in some places for a distance from one to two miles, according to the channel by which entered. Mr. Shortland's plan shows all the dangers we could discover.

"The haven finishes to the N. at Pleasant River, also very convenient, and navigable for two miles by vessels of any burden, and for small craft two miles further still to its head, which northern extremity is only four miles from the high road from Guysborough and the port of Canso.

"Whitehaven Island, the outer point to seaward of the haven, is 140 feet high, and may be considered as the N. E. extremity of Nova Scotia, and the nearest available point of this continent to the British Islands, although itself isolated. The Acadian (French) settlement of Molasses Harbour is separated to the westward by a very narrow isthmus of mere beach from the western part of the haven; besides which there are not now more than eight or ten establishments around Whitehaven.

"Our inquiries relative to ice in winter were very satisfactory. Pleasant River is generally frozen all down to the haven in January and February, and in severe winters the haven has been known to be entirely frozen over, but only once known to have happened to the southward of Fisherman's Island; and the nature of the coast and entrances precludes the possibility of packed or drift ice accumulating, so that the ingress and egress is always free and open.

"It is not more or less subject to fogs than the whole of this south-eastern coast of Nova Scotia, which is all seriously inconvenienced by this impediment to comfortable navigation; and the soundings, with attention, may always give sufficient indication of approach, and the rocky ledges of the coast form an almost continued steep barrier of land."

And in another Report of 5th September, 1846, the distinguished hydrographer says:—

"Whitehaven is not only most conveniently situated—but is a splendid and most commodious port, whose immediate entrance and its harbour are never obstructed or incommoded by drift or packed ice. It has very great facilities of approach, and has only two outlying dangers or small rocks between the port and the open sea, and these only about half a mile from the shore; and in short its nautical facilities of attainment greatly exceed those of Halifax or any other point on the coast that I have seen. The upper part of its fine and beautiful harbour (like Bedford Basin and Halifax Harbour) in some winters freeze over in part, but never so as to obstruct its external communications, its approach, or its perfect safety; and its configuration, as regards the proximate coasts, prevents the accumulation of drift or packed ice either to obstruct or incommode it.

"Its shores offer no impediments to railroad termini wherever convenient, and the vicinity is (in my

judgment) perfectly practicable for rail communications. Comparing the two points nautically, Halifax is a good, capacious, fine, safe harbour; so is Whitehaven, and nothing that I know inferior to Halifax. In clear weather, by night or by day, both are equally available, and equally safe and easy of approach; so that the only circumstance still open to comparison is in the too common case, that at the time when entrance is sought into them respectively all the points and the ship herself may be enveloped in a dense fog, and possibly her own jib-boom end not visible, the most perplexing and appalling case in precise navigation to seamen. In case of fog, the attainment of Halifax harbour requires 20 miles of pilotage navigation; for Whitehaven, never more than three or four, and the last is also more surely beacons.

Major Robinson, the engineer entrusted with the survey of the line, gives the preference to Halifax for a sea-coast terminus.

The total distance from Halifax to Quebec for any line of railway will be about 635 miles, which at £7,000 per mile (a low estimate) will cost £4,445,000—add one-tenth for contingencies, £444,500 = £4,889,500, or in round numbers the proposed trunk line would cost about £5,000,000 sterling.

Along the proposed line of railway from

Halifax to Quebec there are millions of acres of good productive land, only waiting for the men necessary to cultivate them. The following synopsis shows approximately the quantities of ungranted land in the counties through which it is proposed to run the railway between Halifax and Quebec:—

In Nova Scotia: Halifax County, 780,000 acres; in Colchester, 120,000; Cumberland, 180,000 = 1,080,000 acres.

In New Brunswick: Westmoreland County, 301,000; Kent, 640,000; Northumberland, 1,993,000; Gloucester, 704,000; Restigouche, 1,109,000 = 4,747,000 acres.

In Canada: Bonaventure, 2,000,000; Rimouski, 5,000,000; Kamouraska, 500,000; L'Islet, 600,000; Bellechasse, 500,000 = 8,000,000. The grand total of acres in the three provinces amounts to 14,429,000. The land for the railway would require to be purchased in Nova Scotia for nearly its whole course, and in Canada for 110 miles. If a considerable portion of the ungranted land were given to the railway projectors it would facilitate the operation.

CHAPTER IV.

HISTORY, TOPOGRAPHY, GEOLOGY, MINERALOGY, AND PRODUCTIONS OF CAPE BRETON.

THIS singular and valuable island, although included under the same government as Nova Scotia, is of sufficient importance to require a brief separate description. It lies between 45° 27' and 47° 5' N. lat. (including Madame, Scatari, Bouladrie, St. Paul's, and other minor islands), and between 59° 38' and 61° 50' W. long.; its extreme length from N.E. to S.W. being about 100 miles, and its extreme breadth from S.E. to N.W. about 80 miles. It is separated from Nova Scotia by St. George's Bay, and the narrow channel, called the Gut of Canso or Canseau, which in one place is only a mile broad. It comprises an area of about 2,000,000 acres, exclusive of the surface covered by its lakes and rivers. In shape it is somewhat triangular, its south and south-eastern shore forming one side, its western shore (facing Nova Scotia and Prince Ed-

ward Island) another, and its eastern shore the third; the two last terminating almost in a point at Cape North, which, with Cape Ray, in Newfoundland, commands the only entrance to the Gulf of St. Lawrence, except by the circuitous route of the Straits of Belleisle. The distance between them is about 50 miles.

HISTORY.—The island was discovered by Cabot, but what name he bestowed upon it does not appear. Verazani subsequently visited it, and called it Isle du Cap, which name was, in 1713, changed by the French to Isle Royale. Who gave the island the name of Breton is very uncertain—most probably some Frenchmen of Brittany in remembrance of home. It remained uninhabited until 1714, when a few French fishermen from Nova Scotia and Newfoundland took possession of its shores, selecting

the portions most adapted for drying cod-fish or forming small gardens. In 1715, Louis XIV., who had been long contending with the united powers of Europe, anxious to detach queen Anne from that formidable alliance, offered to surrender part of the French possessions in America, and eventually, by the treaty of Utrecht, the French relinquished all excepting Canada, Cape Breton and Prince Edward (then called St. John's) Island. The position of Cape Breton with regard to the navigation of the St. Lawrence, ensured to the French free communication with Canada, while its fine harbours fitted it for the depôt of their trade with the West Indies, and these considerations, together with its valuable fisheries, induced its speedy colonization. On the S.E. coast of the island were laid the foundations of a town two miles and-a-half in circumference, which was called Louisburg in honour of the king of France. The fortifications were not commenced until 1720. A governor and lieutenant-governor were appointed. The Indians of Nova Scotia were solicited to emigrate to Cape Breton, which many of them actually did. The Acadians were also urged to join their countrymen, but as no equivalent was offered to them for the property which they must have necessarily abandoned, they preferred remaining where they were. Meanwhile the French government spared no expense upon the settlement; the outlay on it is stated to have exceeded thirty million livres, but this large sum must have been more than repaid by the lucrative fisheries, 1,800,000 quintals of cod-fish, and 3,000,000 quintals of scale-fish, being annually exported. The French were not long established in Cape Breton before they commenced instigating the Indians to hostilities against the English, and so successfully, that a large fishing post at Canso was twice taken by assault and pillaged. The governor of Nova Scotia vainly appealed to the governor of Cape Breton, urging the atrocity of such outrages in a time of peace, and complaining of the encouragement given to the perpetrators by the people of Louisburg, but he received only the unsatisfactory and evasive answer, "that the Indians were an independent people; and that, if there were any French agents among them, they were the neutrals of Nova Scotia, and not subjects of Cape Breton." The Indians, encouraged by this tacit support, became more and more aggressive; and the colonists of Nova Scotia were compelled to have recourse to those of Massachusetts

to assist them in quelling the aggressive spirit.

Matters were in this position when war was declared between France and England, on the 20th March, 1744. The news of this event did not reach Nova Scotia until some time after it had been conveyed to Cape Breton by a fast-sailing vessel, despatched for the purpose, but bearing instructions to the governor not to attempt the conquest of any post in Nova Scotia until further orders, as the noble fortifications of Louisburg were yet unfinished, and known to be insufficiently garrisoned. But the temptation of taking the English by surprise was not to be resisted. Du Quesnel took upon himself the responsibility of disobeying orders, and hastily fitted out a small armament, which gained possession of Canso, and destroyed its defences. The French then proceeded to lay siege to Annapolis, but were twice defeated, notwithstanding the dilapidated state of the fortifications, by the aid of a reinforcement from New England, with whom the Indians of Passamaquoddy, Penobscot, Pigwogat, and some others, took part. Shirley, governor of New England, considering that the best way of checking the active proceedings of the enemy, would be to carry the war into his own territory, proposed to the council to attempt the reduction of Louisburg. How wild and impracticable this scheme must have at first appeared, may be easily conjectured from the following description of the place, for which I am greatly indebted to the graphic account of Mr. Haliburton. Louisburg was two miles and-a-half in circumference, and entirely encompassed by a rampart of stone from 30 to 36 feet high, and a ditch 80 feet wide, with the exception of a space of 200 yards near the sea, which was enclosed by a dyke and a line of picquets. The water in this place was shallow, and numerous reefs rendered it inaccessible to shipping, while it received an additional protection from the side fire of the bastions, of which there were six, and eight batteries, containing embrasures for 148 cannon, and 16 mortars, but of which only 45 were mounted. On an island at the entrance of the harbour was planted a battery of 30 cannon, carrying 28-pound shot; and at the bottom of the harbour was the grand or royal battery of 28 cannon, 42-pounders, and two 18-pounders. The entrance to the town was at the west gate over a drawbridge, near which was a circular battery, mounting 16 guns.

of 14-pounds shot. Governor Shirley had conceived the idea of attacking this place soon after the capture of Canso, and the same autumn had solicited the assistance of the British ministry, supposing that it might be surprised, if an attempt was made early in the spring, before the arrival of succours from France; he communicated his plan, without waiting for answers from England, in his dispatches to the other colonies, under an oath of secrecy. Wild and impracticable as this scheme appeared to all prudent men, it was natural to suppose that it would meet with much opposition, and it was accordingly rejected: but, upon reconsideration, it was carried by a majority of a single voice. Circulars were immediately addressed to the colonies, as far south as Pennsylvania, requesting their assistance, and that an embargo might be laid on all their ports. The New England colonies were, however, alone concerned in this expedition. The forces furnished by Massachusetts consisted of upwards of 3,200 men, aided by 500 from Connecticut, and 300 from New Hampshire; the contingent from Rhode Island of 300 did not arrive until too late to be of service. Ten vessels, of which the largest carried only 20 guns, with a few armed sloops from Connecticut and Rhode Island, constituted the whole naval force. The command of the expedition was given to William Pepperal, a gentleman who, from being extensively concerned in trade, but yet more from his unblemished character and affable manners, had great influence both in Massachusetts and New Hampshire, where he was very generally known. This popularity was absolutely necessary to the commander of an army of volunteers—his own countrymen, who were to leave their families and occupations, and engage in a hazardous enterprise, to which they were chiefly incited by patriotism and religious enthusiasm. In waging war against the Papists, many, doubtless, believed themselves to be doing God service, and every means was used by their leaders to strengthen this opinion. The famous George Whitfield (then an itinerant preacher in New England) was presented by Pepperal with the colours, and he returned them with the motto, "nil desperandum—Christo duce." Many of his followers enlisted: one of them, a chaplain, carried a hatchet on his shoulder, for the purpose of demolishing the images in the French churches; and the expedition wore the air of a crusade.

Previous to the departure of the fleet a despatch was sent to Commodore Warren, who was on the West India station, informing him of the contemplated attack on Louisburg, and soliciting his co-operation, which Warren refused, on the plea that he had received no orders on the subject, the expedition being wholly a provincial affair, undertaken without the assent, and, perhaps, without the knowledge of the home government. This was a severe disappointment to governor Shirley, but being determined to make the attempt at all hazards, he concealed the information from the troops, and on the 4th of April they embarked for Canso, where they arrived in safety; but were detained three weeks, waiting the dissolution of the ice, with which the coast of Cape Breton was environed. After Commodore Warren had returned an answer to Governor Shirley, he received instructions from England, founded on the communications which the latter had made on the subject, by which he was ordered to proceed directly to North America, and concert measures for the benefit of his Majesty's service. Hearing that the fleet had sailed, he steered direct for Canso, and after a short consultation with General Pepperal, he proceeded to cruise before Louisburg, whither he was soon followed by the fleet and army, which arrived on the 13th of April, in Chaparogue Bay. The sight of the transports gave the first intelligence of the intended attack, for although the English had been detained three weeks at Canso, the French were, until the moment of their arrival, ignorant of their approach. Preparations were immediately made for landing the men, which was effected without much opposition, and the enemy driven into the town. While the troops were disembarking, the French burned all the houses in the neighbourhood of the works, which might serve as a cover to the English, and sunk some vessels in the harbour to obstruct the entrance of the fleet. The first object was to invest the city. Lieutenant-colonel Vaughan conducted the first column through the woods within sight of Louisburg, and saluted the city with three cheers. At the head of a detachment, composed chiefly of New Hampshire troops, he marched in the night to the N.E. part of the harbour, where he burned the warehouses containing the naval stores, and staved a large quantity of wine and brandy. The smoke of the fire, driven by the wind into the Grand Battery, so terrified the

French that they abandoned it, and spiking their guns retired to the city. The next morning Vaughan took possession of the deserted battery, and having drilled the cannon left by the enemy, which consisted chiefly of 42 pounders, turned them with good effect on the city, within which almost every shot lodged, while several fell on the roof of the citadel. The troops were employed for 14 successive nights in drawing cannon from the landing-place to the camps, through a morass. To effect this they were obliged to construct sledges, as the ground was too soft to admit of the use of wheels; while the men, with straps on their shoulders, and sinking to their knees in mud, performed labour requiring the strength of oxen; and which could only be executed in the night or during a foggy day, the morass being within view of the town and within reach of its guns. On the 7th of May a summons was sent to Duchambon, who refused to surrender, and the siege was pressed on with great vigour and spirit. By the 28th of the month the Provincials had erected five fascine batteries, mounted with 16 pieces of cannon and several mortars, which destroyed the western gate, and made a perceptible impression on the circular battery of the enemy. The fortifications on the island, however, had been so judiciously placed, and the artillery so well served, that they made five unsuccessful attacks upon it, in the last of which they lost 189 men. In the mean time commodore Warren captured the *Vigilant*, a French 74, having a complement of 560 men, and a large quantity of military stores. This prize was of the utmost importance, it added to the naval force of the English, and furnished them with a variety of supplies in which they were deficient. Preparations were making for a general assault, when Duchambon determined to surrender; and accordingly, on the 16th of June, he capitulated. Upon entering the fortress and viewing its strength, and the excellence and variety of its means of defence, the impracticability of carrying it by assault was fully demonstrated. The garrison, which contained 650 veteran troops, and 1,310 militia, with the crew of the *Vigilant*, and the principal inhabitants of the city, in all 4,130, pledged themselves not to bear arms for twelve months against Great Britain or her allies; and being embarked on board 14 cartel ships, were transported to Rochfort. The New England forces lost 101

men, killed by the enemy and other accidental causes, and about 30 from sickness; while the French were supposed to have lost 300 men killed within the walls. During the 49 days the siege lasted, the weather was remarkably fine for the season of the year; but the day after the surrender, it became foul, and rain fell incessantly for ten days: had the change occurred at an earlier period, it must, in all human probability, have proved fatal to a large number of the troops, 1,500 of whom were suffering from dysentery.

Not the least singular circumstance connected with this gallant achievement, was the fact that the plan for the reduction of this skilfully constructed fortress, *was drawn up by a lawyer, and executed by a body of husbandmen and merchants*; animated indeed by patriotic zeal, but wholly unpractised in the art of war. The fortuitous concurrence of events did not, as Mr. Haliburton justly remarks, detract from the merit of the man who planned, or of the people who effected, this remarkable conquest; neither did it lessen the benefit thereby conferred on England. Cape Breton was useful to France; and in many respects Louisburg had realised the hopes of those who projected its establishment. It formed a commodious station for the fisheries, which were gradually becoming a source of naval power as well as wealth to France; and its central position, between the principal fishing stations of the English at Newfoundland and Canso, enabled it to check the trade of both. Louisburg was the French Dunkirk of America, whence privateers were fitted out to infest the coast of the British plantations, and to which prizes were conveyed for safety. In the November preceding the capture of Louisburg, the grand French fleet sailed from thence, consisting of three men-of-war, six West India ships, 31 other ships, nine brigantines, five snows, and two schooners. The French West India fleets found a secure harbour there, and the supplies of fish and lumber were carried with convenience from thence to the sugar colonies; besides which, it must be remembered Cape Breton commanded the entrance into the gulf of St. Lawrence, and consequently the navigation to and from the favourite colony of France. The existing state of Nova Scotia must be noted. An attempt had been made by the French to recover the province; the taking of Cape Breton frustrated the execution of this plan, and gave the English an additional

bridle over this half-revolting and disturbed country. The news of this conquest being transmitted to England, general Pepperal and commodore Warren were preferred to the dignity of Baronets of Great Britain, and congratulatory addresses were presented to the king, upon the success of his majesty's arms. Reinforcements of men, stores, and provisions having arrived at Louisburg, it was determined, in a council of war to maintain the place and repair the breaches. Extreme mortification was felt by the French court at this unexpected event; and an expedition on a very unusual scale was fitted out for the recovery of Cape Breton and the conquest of Nova Scotia, whose unsuccessful and disastrous issue has been already related in the history of the latter place. At the peace of Aix la Chapelle in 1749, Cape Breton was restored to France, greatly to the surprise and grief of the brave colonists, who had so valiantly obtained it, and who, with much reason, considered its position essential to the safety and tranquillity of their own territory. In 1757, colonial rivalry between England and France had reached its highest point; and it was resolved again to attempt the capture of Cape Breton.

The state of Louisburg at this time appears to have been very flourishing. A publication entitled, "Genuine Letters and Memoirs relative to the National, Civil, and Commercial History of the Islands of Cape Breton and St. John, by an impartial Frenchman," of which an English translation was published in London in 1761, gives the following account of the town, immediately before its capture by the English in 1758, by an eye-witness:—"It was built on a neck of land on the S.E. part of the island, and was nearly a league in circumference, with wide and regular streets, a spacious quay; wharfs projecting into the sea, convenient for shipping; fortifications consisting of two bastions and two demi-bastions, three gates; and near the principal fort and citadel, a handsome parade. The stone buildings for the use of the troops and officers of the French government were constructed with materials brought from Europe. The port, about three miles in length, and upwards of a mile in its smallest breadth, with a carrening and wintering ground for ships, was protected by a battery level with the surface of the water, consisting of 36 24 pounders; the harbour was also defended by a *Cavalier*, with 12 embrasures, called by the name of *Maurepas*. The royal battery,

at the distance of a mile from the town, which it commanded, and also the bottom of the bay, contained 30 pieces of cannon, viz., twenty-eight 36-pounders, and two 18-pounders. The population of the town, exclusive of the troops, was about 5,000; its administration was confided to a governor and supreme council; there were courts of law and of admiralty; a general hospital for soldiers and sailors, served by brothers of the charitable fraternity, and the 'nuns of Louisburg' superintended the education of young girls." The inhabitants of Louisburg and the other settlers in Cape Breton, of which the principal places were Port Dauphin within the Bras d'Or, St. Anns, Spanish Bay (now Sydney), Port Toulouse (St. Peters), Arichat, Petit de Grat, and Rivier, were chiefly engaged in the fisheries, which must have been carried on to a great extent. Mr. M'Gregor says, that the trade there employed near 600 vessels, exclusive of boats, and between 27,000 and 28,000 seamen; if this were the case, it is not surprising that the French ministry paid such attention to Cape Breton, and considered the fishery a more valuable source of wealth and power to France than even the mines of Mexico and Peru would have been. The parliament of England also, by the energetic appeals of Mr. Pitt, had been fully awakened to the mistake that had previously been made in relinquishing Louisburg, not only from its importance, which had been greatly undervalued, but because no course of policy which gave to the colonists a just cause of dissatisfaction with the mother country, could be justifiable, however weighty the considerations which dictated it. A large body of men were raised in England in aid of the colonists. Halifax was fixed upon for the rendezvous of the British land and sea forces. Admiral Holborne arrived at Chebucto harbour in the middle of July with a powerful squadron, and 5,000 British troops under the command of Viscount Howe, and was soon after joined by Lord Loudon with a corps of 6,000 men from New York; but the season was considered too far advanced for the enterprise, and it was resolved to defer it to the ensuing spring. Admiral Holborne sailed for Louisburg, with 15 ships of the line, 4 frigates, and a fire-ship, for the purpose of reconnoitring the enemy. On the 20th of August he appeared before the harbour, and saw the French admiral, La Motte, make the signal to unmoor; but being greatly inferior in strength to the

enemy, he did not choose to risk an engagement, and therefore returned to Halifax. About the middle of September, having received a reinforcement of four ships of the line, he again appeared before Louisbourg, and endeavoured to draw the enemy to a battle. La Motte, however, in his turn, was too prudent to hazard an engagement, the loss of which must have exposed all the French colonies to the attacks of the English. Before the arrival of the reinforcement, the British fleet at Halifax consisted of the following ships:—

Name of Ship.	No. of Men.	No. of Guns.	Name of Ship.	No. of Men.	No. of Guns.
Newark . . .	700	80	Ferrit Sloop . .	120	16
Invincible . . .	700	74	Success . . .	160	22
Grafton . . .	580	68	Port Mahon . .	150	22
Terrible . . .	630	74	Nightingale . .	150	22
Northumberland	520	68	Kennington . .	150	20
Captain . . .	580	68	Elphingham . .	150	20
Bedford . . .	480	64	Furnace boom . .	100	11
Orrford . . .	520	68	Ditto . . .	100	16
Nassau . . .	480	64	Vulture sloop . .	100	14
Sunderland . .	400	64	Hunter . . .	100	14
Defiance . . .	400	64	Speedwell . . .	90	12
Tilbury . . .	400	64	Hawke . . .	100	12
Kingston . . .	400	60	Gibraltar's Prize	80	12
Windsor . . .	350	54	Jamaica . . .	100	14
Sutherland . .	306	50	Lightning, fire-ship . .	50	—
Winchelsea . .	160	24			

Total, 10,200 men, 1,350 guns.

The squadron continued cruising before the harbour of Louisbourg until the 25th, when they were overtaken by a terrible storm; in twelve hours they were driven within two miles of the breakers, on the coast of Cape Breton, when the wind providentially shifted, and saved the whole squadron from inevitable destruction, except one vessel which was lost on the rocks, and about half of her crew perished. Eleven ships were dismasted, others threw their guns overboard, and the whole returned to England in a shattered condition.

The successes of the French during this campaign left the affairs of the British North American colonies in a gloomy state. The former had obtained full possession of Lakes Champlain and George, and the command of those which connect the waters of the St. Lawrence with the waters of the Mississippi, and the undisturbed possession of all the country west of the Alleghany mountains. But the appointment of Mr. Pitt, during the autumn, to the premiership of the new administration, gave cheering hopes to all parties, both at home and in America. Immediately after taking office he wrote a circular letter to all the colonies, assuring

the colonists of his determination to send out a large force to co-operate with them by sea and by land, against the French, and urging them to raise as large bodies of men as the number of inhabitants in their respective governments would permit. The Provincials displayed, upon this occasion, their usual energy, and were ready to take the field early in May; previously to which Admiral Boscawen arrived at Halifax with a formidable fleet and a powerful army, under general Amherst. The whole armament, consisting of 151 sail, and 14,000 men, took their departure from Nova Scotia on the 28th of May, and on the 2nd of June, 1758, anchored in the Bay of Gabarus, about seven miles to the westward of Louisbourg, whose garrison, commanded by Chevalier Drucor, consisted of 2,500 regular troops, 300 militia, formed of the inhabitants, and who, towards the end of the siege, were reinforced by 350 Canadians and Indians. The harbour was secured by six ships of the line and five frigates, (the Prudent, Entreprenant, each 74; the Capricieux, Celebre, and Bienfaisant, of 64 guns; the Apollo, of 50; the Chevre, Biche, Fidele, Diana, and Echo, frigates,) three of which they sunk across the entrance, in order to render it inaccessible to the English shipping. Six days elapsed before the troops could be disembarked, on account of the heavy surf which broke with prodigious violence on the whole shore: but on the seventh, the agitation of the water having partly subsided, the troops were distributed in three divisions, and ordered to effect a landing. The right and centre, under the command of governor Lawrence and general Whitmore, received instructions to make a show of landing, to distract the attention of the enemy, while the real attempt was made in another quarter by general Wolfe. The French reserved their fire until the boats had nearly reached the shore, when they opened a tremendous discharge of cannon and musketry, which, aided by the surf, overset and sunk many of the boats. The men, encouraged in all their difficulties by the example, spirit, and conduct of their gallant commanders, gained the beach at the Creek of Cormoran, and compelled the enemy to retire to the town. As soon as the stores and artillery were landed, which was not effected without great difficulty, General Wolfe was detached, with 2,000 men, to seize a post occupied by the enemy, at the Light-house Point, from which the ships in the harbour, and fortifications

in the town, might be greatly annoyed. On his approach it was abandoned, and several very strong batteries were erected there. The fire from this place, by the 25th, completely silenced the island battery, which was immediately opposed to it. In the interim, the besieged made several sallies with very little effect, while the approaches to the town were conducted with resolute but cautious vigour. The Bizarre and the Comet escaped the vigilance of the squadron before the commencement of the siege, and the Echo attempted to follow their example, but was captured soon after she left the harbour. On the 21st of July, one of the largest of the French ships blew up with an awful explosion: the fire was communicated to two others, both of which were consumed in a short time to the water's edge. Admiral Boscawen then sent 600 men in boats into the harbour, to make an attempt on two ships of the line, which still remained in the basin—the Prudent, a 74-gun ship, and the Bienfaisant, of 64 guns. The former having been run aground, was destroyed, and the latter was towed past the batteries in triumph, with the inconsiderable loss of seven men killed, and nine wounded. This gallant exploit placed the English in complete possession of the harbour, and several important breaches being made in the works, the fortress was no longer deemed defensible, and the governor offered to capitulate. The terms proposed by him were refused, and it was required that the garrison should surrender prisoners of war, or sustain an assault by sea and land. The humiliating conditions, at first rejected, were afterwards agreed to; and on the 26th of July, 1758, the Chevalier Drucor signed the articles of capitulation.

Thus, at the expense of about 400 men, killed and wounded, the English obtained possession of the important island of Cape Breton, and the strong town of Louisburg, in which they found 231 pieces of cannon, 18 mortars, and a considerable quantity of stores and ammunition. The merchants and inhabitants were sent to France in English vessels, but the garrison, together with the sea officers, marines, and mariners, amounting in all to 5,637 men, were transmitted to England. The loss of Louisburg was the more severely felt by the French king, from its being attended with the destruction of so many line-of-battle ships and frigates. Despatches with the particulars of this glorious victory were immediately sent

to England by Captain Amherst (brother to the Commander-in-chief), and accompanied by eleven pair of the enemy's colours. These were, by his Majesty's orders, carried in joyful parade, escorted by detachments of horse and foot guards, with kettle drums and trumpets, from the palace of Kensington to St. Paul's Cathedral, where they were deposited as trophies, during a discharge of cannon and other expressions of triumph and exultation. Public rejoicings for the conquest of Louisburg were manifested throughout the British empire; congratulatory addresses from numerous places were sent to the king, and the enthusiastic exultation expressed and excited by the occasion, probably contributed materially to the subsequent acquisition of Canada.

The British government fearing Louisburg might again fall into the hands of the French, dismantled the fortifications, which have ever since remained in ruins; the island was unaccountably neglected by England, and it was not until after the American revolution, when several American loyalists settled in the colony, that it was again brought into notice, separated from the government of Nova Scotia, and erected into a distinct colony. Sydney, its present capital, was then founded. Immigration from the Highlands of Scotland commenced in 1800, and added much to its population, which has been further increased by their countrymen of late years. In 1820, Cape Breton was re-annexed to Nova Scotia, of which it formed a county, with the privilege of sending two members to the House of Assembly, at Halifax. The number of members has been increased to six. A portion of the inhabitants have been seeking for several years the repeal of the Legislative Union with Nova Scotia; but it is a question, the justice or expediency of which it is not necessary here to discuss.

Topography.—Cape Breton is divided into two peninsulas by the great inlet of the sea termed Bras d'Or, or Bras d'Or Lake, which ramifies in the most singular and romantic manner throughout the island, and at one point approaches within a mile of the Atlantic on the opposite coast. The portions of Cape Breton thus separated strikingly contrast with each other, that on the N. being high, bold, and steep, with dangerous coasts, whose rocky and often perpendicular cliffs have a grand but forbidding aspect, which is rarely relieved by harbours; while that on the S. is low, undulating, and intersected by numerous streams, but gradually

risks from the interior shore of the Bras d'Or, until it presents abrupt cliffs towards the ocean. The highest ridges in this division are estimated at from 600 to 800 feet, while the altitude of those in the northern division is much greater. The loftiest point, Cape Enfumé (Smoky Cape), is estimated by Mr. M'Gregor at 1,800 feet above the level of the sea. The Bras d'Or appears to have been caused by an earthquake, or some other convulsion of nature, which, by separating the land, made way for the interruption of the ocean far beyond its previous boundary. It enters Cape Breton from the Atlantic, between Sydney and St. Ann's Bay, by two channels, N. and S. of an island called Bouladrie. The S. passage, called Little Bras d'Or, is about 23 miles long, and from a quarter to three miles wide, but rendered unnavigable for large vessels by a bar at its mouth. The N. passage, Great Bras d'Or, is 25 miles long, 2 or 3 wide, with a free navigation, and above 60 fathoms soundings. The Bras d'Or itself is the union of these two branches, which form the great lake in the centre of the island, with several fine bays, where the timber ships for England usually load, at a distance of 40 miles from the main ocean. The length of this noble sea-water lake is about 50 miles, its greatest width 20, with a depth varying from 12 to 60 fathoms, everywhere securely navigable, and by reason of its numerous bays and inlets affording the benefit of inland navigation to almost every farm in the country. Several fresh-water lakes exist in both divisions, the largest are Lake Marguerite, in the N. division, which is about 40 miles in circumference; the Grand River and Miray Lakes in the S., the latter, together with its river intersecting the island on its S. E. coast for 30 miles, in the rear of the site of the ancient fortress of Louisburg.

Sydney, the capital of Cape Breton, in lat. $46^{\circ} 18'$, long. $60^{\circ} 31'$, is beautifully situated at the head of a fine bay, on a narrow but somewhat elevated tongue of land, stretching into the extensive inlet which forms its secure and capacious harbour. The town is small but compactly built, and contains the usual number of public buildings, and about 80 houses. An academy was commenced, and £600 were expended upon it, but it remains unfinished, and is apparently going to ruin. The excellent position of Sydney with regard to the fisheries, the rich coal mines on its shore, the

fertile agricultural tracts in its vicinity, together with its noble harbour, led its founders to anticipate its rapidly becoming a place of great importance. Why its present state falls so far short of their expectations, is difficult to conceive; perhaps, chiefly, from its many advantages being too little known by the class most likely to avail themselves of them. A promising settlement, called North Sydney, near the shipping place of the coal mines, has lately sprung up. From Sydney to Louisburg the shore presents frowning headlands, low beaches, bays, rivers, and a few islands. The cliffs along the whole coast, from the Bras d'Or to Cow Bay, are streaked with seams of coal. Cow Bay is separated from Miray Bay by a low barren peninsula. Nearly opposite the latter, a few miles off, lies Scatarie Island, for which vessels bound from England to the North American colonies, usually shape their course. The island is sterile, but forms a good fishing station. A lighthouse recently erected, was greatly needed in its vicinity, to avert the fearful loss of life and property formerly of frequent occurrence. Louisburg Harbour in lat. $45^{\circ} 54'$, long. $59^{\circ} 52'$, has an entrance about a quarter of a mile wide between some small rocky islets, with a narrow passage near the W. point, on which Louisburg stood. The basin within is three miles long by one wide. The town itself is so reduced to ruins that, at first sight, the outlines of the chief buildings are scarcely discernible, and the once formidable batteries blasted by gunpowder, present a striking evidence of past grandeur. The strong and capacious magazines, where immense stores and munitions of war were formerly deposited, are nearly entire; but hidden by the accumulation of earth and turf, they are trodden over by flocks of sheep, who feed in peace over the last resting-place of many a gallant Frenchman and patriotic Briton, while near the harbour, beneath the "clear cold wave," may be seen the vast sunken ships of war, whose very bulk indicates the power enjoyed by the Gallic nation, ere England became mistress of her colonies on the shores of the western world. Desolation now sits with a ghastly smile around the once formidable bastions—all is silent except the loud reverberating ocean, as it rolls its tremendous surges along the rocky beach, or the bleating of the scattered sheep, as, with tinkling bells, they return in the dusky solitude of eve, to their strange folds.

Mr. M'Gregor, who visited the spot, well describes the melancholy contrast formed by the past and present state of Louisburg. The inhabitants along the coast are chiefly Acadian French fishermen, and it is frequented principally by Jersey and Guernsey people. Beyond Louisburg is the deep Bay of Gabarus, on which is a settlement of American loyalists: from thence to St. Esprit the coast is naked and rocky, with red earthy banks, and the land for some distance inland is destitute of timber, and, with few exceptions, barren and unfit for cultivation.

At St. Esprit the country improves: that around Grand River and the lakes connected with it, is said to be excellent. A considerable portion has been settled by emigrants from Scotland. The shore from Grand River to the Gut of Canso is broken and indented with numerous small coves and harbours. The land is good, and occupied by several thriving Acadian settlements; but the principal employment of the inhabitants is fishing.

Arichat, the second shire town in Cape Breton, is situated on the island of Madame, which lies near the south entrance of the Gut of Canso, opposite Cranberry Island, on which there is a light-house, and is divided from Cape Breton by a narrow strait, called Lennox Channel. The town is situated on a safe and commodious harbour, and has long had considerable trade with the Jersey merchants, who export fish from thence to Europe and the West Indies. Its population and commercial importance are rapidly increasing. It sends a representative to the House of Assembly at Halifax. The island is about 16 miles long by five broad, is deeply indented, and has some good soil, especially round the lakes in the interior. The Gut of Canso has been already noticed in the topography of Nova Scotia. It is bordered on the Cape Breton shore, by a dense colony of Highlanders, reaching about four miles inland. The north-west coast of Cape Breton, from the Gut of Canso to Port Hood, a distance of 18 miles, is well situated and thickly inhabited; and, looking from the sea, houses may be observed through openings in the forests, reaching almost to the summits of the hills and mountains. Port Hood is an excellent harbour, fit for the largest-sized vessels. It is the third shire town in the island, and has a considerable export of cattle to Newfoundland. Beyond it the cliff becomes almost precipitous,

particularly near Cape Mabou, an abrupt and lofty headland, where there is a harbour for small vessels. The coast assumes the appearance of a bold mountainous amphitheatre, but the steepes are successfully cultivated by the settlers, who are chiefly Highlanders, mixed with some Irish, and American loyalists. About 50 miles north of Port Hood, the Marguerite, or Salmon, a considerable river, flowing from a large lake which lies between the Gulf Shore and the Bras d'Or, falls into the sea. The land on both sides of this river, for several miles, and along the coast northward for 16 miles, is occupied entirely by Acadians, who, besides employing themselves actively in fishing, cultivate pastoral and agricultural pursuits.

At Chetican, the Jersey merchants have a fishing station, and from thence to Cape North (the extremity of the island) an iron-bound coast presents its frowning front to the mariner. About ten miles from Cape North is the island, or rather rock, called St. Paul, on which two light-houses have been recently erected. On the N.E. end is a fixed light; on the S.W. end a flash light. St. Paul's is about a mile in length, and three quarters of a mile in breadth, and being in a direct line with Cape Ray, in Newfoundland, it fearfully endangered the navigation of the principal entrance to the Gulf of St. Lawrence. The water is deep close to the rocks: thick fogs prevail in its immediate vicinity, and, combined with strong conflicting currents, have wrecked many a gallant vessel. Human bones are to be seen bleaching on the rocks, and massive anchors lie beneath the waters. In one year (1833) here and at Scatari, four ships, four brigs, and two schooners, containing upwards of 600 souls, were lost. Aspey Bay, (on which is a thriving settlement), and several other bays line the coast, down to Cape Enfumé. The shore then bends southward and eastward for twenty miles to St. Anne's Bay, which, after narrowing to a strait very narrow, again expands into a capacious haven eight miles in length, from one to three in breadth, secured by high lands from all winds, and extremely beautiful from its numerous coves and creeks, and the bold, yet fertile country, which surrounds it.

The French at first made their principal station under the name of Port Dauphin, but they afterwards abandoned it in favour of Louisburg; and it was almost deserted until about 30 years ago, when a Scottish

colony planted themselves in it, and are now thriving prosperously. The interior of Cape Breton is yet uncultivated and even imperfectly known, except that portion of it which forms the coasts of the Bras d'Or. This is said to be generally of good quality, and has been settled, almost exclusively by Scottish emigrants; but an active fishery is carried on near its entrance by Irishmen from Newfoundland. Bras d'Or Lake terminates in two bays. One called St. Andrew is 20 miles long, the other called St. George, is about 15 miles in length. That of St. Peter is much smaller, but important from its approaching within 900 yards of the bay on the opposite coast.

The shores of this internal sea are not remarkable for their height. Numerous streams flow into it by circuitous channels forming low marshy islands. A tract on St. Andrew's Bay is still occupied by the Mic Mac Indians.

GEOLOGY.—The extensive coal, iron, and other mines in Cape Breton, seem to require some details under this head, for which I am indebted chiefly to the returns furnished by Judge Haliburton. The island contains from sandstone downwards, the whole of the rocks which constitute the transition and primitive formations.

Primitive and Transition Classes.—Beginning with the high land which extends from the head of the eastern arm of the great lake, nearly to St. Peter's, a great variety of rocks occur: granite, the oldest of the primitive class, occupies a considerable portion. It is generally of a very small grain, and of a grey or red colour, the former being the most prevalent. It passes insensibly into sienite or greenstone, presenting a steep and broken cliff to the edge of the lake, and rising in abrupt precipices from the numerous deep ravines which intersect this part of the island.

The character and appearance of this rock (greenstone) are very diversified. In some places it passes imperceptibly into a claystone porphyry, of a dull green colour; in others, its structure is slaty, and the crystals scarcely discernible.

Clay-slate has only been noticed in one instance, namely, on the south shore of the harbour of Arichat, where it occurs, stratified in vertical beds, traversed by numerous small veins of quartz and calcareous spar. Its superficial extent is very inconsiderable, and it appears to be surrounded with greywacke, which occupies nearly the whole of

the Isle of Madame. There is probably no place of equal extent that can afford such numerous specimens of greywacke as this small island; it may be seen passing from clay slate, through an endless variety of gradations, into old red sandstone. Between great and little Arichat, immense weather-beaten masses of a very coarse kind, protrude above the surface, which is consequently rugged and barren; proceeding hence to Descons, it gradually becomes more compact and granular, and it may be seen in its last stage at that place, where it passes into old red sandstone.

Greywacke and greywacke-slate also occupy an extensive tract, between the Red Islands and St. Peters, stretching out towards the head of the Grand River in an easterly direction. Associated with this formation, there are several beds of transition limestone, both in the Isle of Madame and opposite the Red Islands; at the latter place a deposit of shell limestone, apparently unstratified, may be seen almost in immediate contact with several vertical beds of a reddish-brown limestone, which is translucent on the edges.

Secondary Class.—Proceeding geologically upwards, the next formation is the *old red sandstone*, which reposes upon the greywacke, and is intimately connected with it. From the great entrance of the Bras d'Or Lake, it ranges in a south-eastern direction across the island of Bouladrie, passing to the southward of the town of Sydney, and underlying the carboniferous limestone, which forms the south-west boundary of the Sydney coal field. The remark made by Conybeare on the agricultural character of this rock, is strikingly verified in the preceding localities; for instance, in Lennox Passage, where the sandstone beds exclusively prevail, the soil is sandy and barren, affording support only for mosses, ferns, and brushwood; but where the sandstone alternates with argillaceous beds, the soil is, on the contrary, fertile and productive, as the luxuriant groves of hardwood on the island of Bouladrie bear ample evidence.

The carboniferous limestone which rests upon the old red sandstone, is a rock of the greatest importance, for it determines the boundaries and extent of the coal fields which it surrounds, constituting the basin or trough in which the coal veins and strata associated with them, are deposited.

The Eastern Coal District of Cape Breton commences on the northern head of Miray Bay on the east coast and continues

to the great entrance of the Bras d'Or Lake. It is in length 35 miles, and averages five miles in width, and deducting the harbours, bays, and numerous indentations in the coast, comprises 120 *square miles of land containing workable veins of coal*. The carboniferous limestone which forms the base of the Sydney coal field, may be traced from Cape Dauphin, crossing the Island of Bouladrie in a continuous line to the town of Sydney, the course being about S.S.E., and dipping to the N.E. If a line be drawn from Scatari Isle to Sydney, and thence to Cape Dauphin, it will form the S.W. boundary of the Sydney coal field; the general dip of the veins being towards the N.E., we cannot therefore determine their boundary in that direction. Judging from the comparative inclination of the highest and lowest strata on the western shore of Spanish River, where there is a cliff three miles in length, crossing the beds in the direction of their dip, we should suppose that the lower veins crop out in the sea 10 or 12 miles from the shore. The high cliffs which form an extended line of mineral precipices along the whole coast, exhibit very satisfactory and interesting sections of the strata, from the shale and grit beds overlying the limestone to the highest veins of coal. In these cliffs, 14 veins of bituminous coal of excellent quality, none of which are under three feet in thickness, have been observed. Richard Smith, Esq., detailed a singular fact connected with these coal mines. In his evidence before Parliament some years ago respecting accidents in mines, he said:—

“When we first struck the coal at the depth of about 180 feet, it was highly charged with water; the water flew out in all directions with considerable violence; it produced a kind of mineral fermentation immediately. The outburst of the coal crossed the large river which passed near the coal-pit. We were not exactly aware of the precise outcrop, on account of a strong clay paste eight or ten yards thick. It is rather difficult to find the outburst of coal, when clay paste is thickly spread over a country. At the river the water boiled similarly to that of a steam engine boiler, with the same kind of rapidity; so that on putting flame to it on a calm day, it would spread over the river, like what is commonly termed setting the Thames on fire; it often reminded me of the saying. It is very common for the females, the workmen's wives and daughters, to go down to the river with the washing they have to perform for their families. After digging a hole in the side of the river, about ten or twelve inches deep, they would fill it with pebble stones, and then put a candle to it; by this means they had plenty of boiling water without further trouble, or the expense of fuel. It would burn for weeks and months unless put out. I mention this to show how highly charged

the coal was with gas. What I am now going to describe, may be worth a little attention. There was no extraordinary boiling of water, or rising of gas, before we cut the coal at the bottom of the pit, more than is usually discernible in a common pond of stagnant water, when a long stick is forced into the mud. As soon as the coal was struck at the depth of 180 feet, it appeared to throw the whole mine into a state of regular mineral fermentation. The gas roared as the miner struck the coal with his pick; it would often go off like the report of a pistol, and at times I have seen it burst pieces of coal off the solid wall, so that it could not be a very lightly charged mine under such circumstances. The noise which the gas and water made in issuing from the coal was like a hundred thousand snakes hissing at each other.”

The total thickness of the strata constituting the coal measures on the W. side of the harbour of Lingan amounts to 1,740 feet; that of the millstone grits and shale, probably 1,200. The thickness of the carboniferous limestone has not yet been ascertained.

Western Coal District.—This includes the coal field on the River Inhabitants, and those of Port Hood and Mabou.

New Red Sandstone.—The last, but by no means the least important of the regular consolidated formations which occur in this island, is the new red sandstone, which is undoubtedly the most extensive deposit we have to notice. It commences beyond the outcrop of the old red sandstone, and is seen reposing in horizontal beds almost immediately upon the basest edges of the highly inclined strata of that rock in the great entrance to the lakes, about 10 miles S.W. of Cape Dauphin; covering an extensive area, it would be impossible to describe its different characters; in general, it is of a deep red colour, and very coarse description, containing immense beds of conglomerate.

In a commercial point of view, the new red sandstone ranks next in importance to the coal fields of the island, for it contains immense deposits of gypsum, of a very superior quality for agricultural purposes, and is becoming an article of considerable traffic with the United States, where its value is appreciated. It constitutes a cliff several miles in extent, and in some places 30 feet in height. The gypsum in the lower part of the cliff is sufficiently compact for architectural purposes, and that near the surface appears well adapted for potters' moulds, stucco, flooring, &c. It is very conveniently situated for exportation, as vessels of great burthen may approach close to the cliff. It occurs abundantly in various other places.

The numerous salt springs which have

their source in the new red sandstone, will be found well worth the attention of capitalists. Placed so near the veins of coal, essential in the manufacture of salt, and situated in the very heart of the best fisheries of North America, they promise fair to become, at a future day, a productive source of wealth to the proprietors, and of incalculable benefit to the fisheries.

St. Paul's Island appears to be quite unconnected in a geological sense with the strata constituting the northern part of Cape Breton, and would seem to have been originally formed by a submarine volcano. The basalt found on it is of a black colour, with a greenish shade, and apparently contains a large proportion of oxide of iron. This island rises like an immense cone from the bottom of the ocean, the sloping sides becoming nearly vertical at the surface of the water, and forming an abrupt cliff. The depth of water is very great close to the shore, and, at only three miles distance from the northern extremity, a line of 140 fathoms did not reach the bottom. Connected with the geology of the country are its metallic minerals; copper, iron, and lead are found in great variety, the two former in abundance.

The Soil is light, on a sandstone rock, thickly covered with huge boulders of granite, in many places alluvial, presenting extensive tracts of land fit for the cultivation of any crops. On the N.W. coast, in the valleys and along the banks of the small rivers a deep rich soil prevails. There is a good deal of wet, mossy bog land, which, as the country becomes cleared and peopled, will yield excellent crops.

Climate.—Cape Breton in some respects resembles the neighbouring peninsula, with perhaps more moisture from its insular position. The fog, which is swept along the shores of Nova Scotia by the S.W. wind, and along the S.E. coast of Cape Breton, as far as Scatari, is then blown off to sea: it never extends far inland, being dissipated by the reflected heat. The climate is exceedingly healthy, and the water excellent—two things of paramount value to the settler. The seasons may be thus indicated:—in June the blossoms of the indigenous shrubs appear; apple trees are in full bloom in the beginning of July, when strawberries are in perfection; hay is made in July and August; in the latter months raspberries and oats ripen, as do also currants and gooseberries, wheat in September, and apples and plums

hang on the trees until the approach of winter in October and November.

Animal Kingdom.—All the usual domestic animals, besides the moose and cariboo; the former are now comparatively scarce, owing to an indiscriminate massacre which took place for the sake of the hides, soon after the English settled in the country. So great was the destruction of these fine animals that hundreds of carcasses were left scattered along the shore from St. Ann's to Cape North, creating a stench so powerful as to be perceptible to vessels a considerable distance at sea.

Remains of huge animals are found, which it would appear formerly ranged in the vicinity of the Bras d'Or. Enormous bones, resembling thigh bones, six feet in length, are reported to have been seen lying at the bottom of the lake. In the bed of the Wagamatcook, shortly after the settlement on that river, an extraordinary skull was discovered. One of the teeth which was taken to Sydney, resembled, in general appearance, the molares of the human jaw: its greatest measure was about eight inches; but whether that length had been transversely or longitudinally situated in the jaw, could not be determined by those who had not seen the skull from which it had been taken. The thickness from the root to the crown of the tooth was four inches, and the width across the crown about the same. There were ten processes upon the crown; five on either side. I give this statement on the authority of Mr. Haliburton; but a Nova Scotia newspaper of the year 1837, has the following more extraordinary statement:—"The tooth of an extinct species of animal has been recently found at Cape Breton, measuring 17 inches in length, eight inches round the thickest end, and weighing two pounds fifteen ounces; though partially decayed, a large portion is in an excellent state of preservation."

The Indians have a story, that a huge animal once raised its head out of the water of the Middle Barrasoi of Aspey Bay, near Cape North, and so terrified them, that it was long before any would venture thither again.

POPULATION.—The number of mouths is estimated at 50,000, of whom the greater part are emigrants from the Highlands of Scotland and their descendants. They are chiefly employed in agriculture. The next most numerous race are the original European colonists, or French Acadians; an

industrious people, employed in the fisheries, and in building small vessels. The remaining colonists consist of English and Irish settlers, disbanded soldiers, and American loyalists, who were located here after the American war. The Mic Mac tribe, whose ancestors once tenanted the whole island, are now reduced to about 300, many of whom have embraced the Roman Catholic religion, and are becoming civilized to some extent: they have lands assigned to them amounting to 10,000 acres.

Products.—Coal, fish, gypsum, and timber. The rivers, creeks, and bays teem with every variety of the finny tribe. The extent of coal and gypsum has been already stated: timber of excellent quality grows in immense forests: live cattle, butter, cheese, potatoes, oats, &c., are becoming increased articles of export to Newfoundland.

The coal trade is increasing, and forms a lucrative traffic for Cape Breton as well as for Nova Scotia. The following is a return of the quantity of coal sold at the mines of the "General Mining Association" in Nova Scotia and Cape Breton, now open and in course of working:—

Sold in the Years	1845.	1846.	1847.	1848.
	Ch.	Ch.	Ch.	Ch.
For the British Provinces	44,412	45,165	48,710	54,762
" United States . .	59,968	57,570	91,477	76,017
Total . .	104,410	102,735	140,187	130,779

It will be seen from the above, that the United States consume a larger quantity of coal from Nova Scotia and Cape Breton than the British American provinces. By the exertions of T. B. Foord, Esq., the able London secretary of the Mining Association, markets for their coal have been opened in all the seaports of the United States. The Pictou coal, being free from sulphur, is most used for manufacturing purposes, such as the smelting of iron and for gas; the Cape Breton coal for domestic use and for steam-vessels: both are equally applicable for the latter purpose, though more so when burned together. The Liverpool and Halifax steamers burn the Cape Breton coal on their voyages from America to England. In proportion to the progress of manufactures and population in the United States, the demand for coal from the British American provinces will increase, as Nova Scotia and Cape Breton are the only districts in North America in which this valuable mineral has been found of superior quality. It has been

erroneously supposed that the "General Mining Association" have a monopoly of all the coal and iron in Nova Scotia and Cape Breton. By the lease granted to the Duke of York, for 60 years, from 1825, of all the mines and minerals in Nova Scotia and Cape Breton, an exception was made of such lands in the province as had been previously granted to individuals, over which the Crown had reserved no mineral rights. Wherever, therefore, coal or iron can be found in Cape Breton or Nova Scotia thus situated, the proprietors, or their lessees, may work the mines; and, indeed, a company is now being formed in the province for this purpose, termed the "Londonderry Coal and Iron Company." The "General Mining Association," as sub-lessees of the late Duke of York, at a fixed rent of £3,000 per annum, have expended a million and-a-half of money in the province, from which great benefit must have accrued to the colony. The Royalty is two shillings per chaldron on every chaldron shipped above 26,000 chaldrons Newcastle measure.

The Sydney and Bridgeport coal mines are both in the island of Cape Breton. The Sydney mines are situated on the north-west entrance of Sydney harbour, a harbour unsurpassed by any in British America, and accessible in all winds. This coal field is similar in quality to that of Newcastle. It is well suited for all the purposes of good fuel, especially for domestic use. It is highly bituminous, ignites readily, gives a strong lasting heat, and leaves but little ash. A railroad has been made from the pits to a point of the harbour, where vessels of any burthen can load with ease, and are well sheltered from the prevailing winds. The establishment at the Sydney mines consists of about 150 persons, who occupy 50 houses, including the buildings required for the works.

The Bridgeport mines are situated on the southern shore of Indian Bay, one mile and three quarters from the harbour where vessels load, and which is perfectly secure for shipping in the most boisterous weather. The southern head of Indian Bay, which is called Cape Table, bears by compass from Flint Island N.W. by W., distance eight miles and-a-half, and the northern head of the Bay bears from the light-house on Flat Point at the entrance of Sydney harbour S.E., distance four miles. Vessels may run safely into four fathoms water between the northern and southern heads.

The coal from these mines is of excellent

quality, of the same description as the Sydney, and little inferior to it. A railroad has been laid from the pits to the shipping-place, and along which the coal is carried and deposited at once in the holds of the vessels.

This establishment employs about 100 persons: the houses and buildings exceed 20 in number, exclusive of wharfs, saw-pits, &c. The island is valuable in an agricultural as well as in a mineral point of view: In 1839, '40, and '41, the quantity of land sold was 13,840 acres, at an average price of 2s. 4d. per acre.

The indifference too long manifested con-

cerning Cape Breton is gradually passing away, because its importance and capabilities are becoming better understood. It is to be hoped that the improvement now taking place in the social condition of the people may steadily progress, and that the blessings of religion and education may be, ere long, extensively diffused among them. They well deserve the hearty co-operation and goodwill of Britain, for their attachment towards her, and the readiness they have evinced to defend their island against the enemies of the vast empire of which they form a small but valuable *and valued* part.

CHAPTER V.

SABLE ISLAND, THE MAGDALEN ISLANDS, AND BRION ISLAND.

SABLE ISLAND, famous for the disastrous attempt at colonization, made on its inhospitable shores by the Marquis de la Roche in 1598, has since acquired a still more painful notoriety from having been the scene and occasion of very many shipwrecks, from its lying in the direct track of vessels to and from Europe. It is about 85 miles distant from Cape Canso, and is included in the province of Nova Scotia. Its length is about 30 miles, its breadth varies greatly from its irregular outline, which is somewhat in the form of a bow. The W. end is in N. lat. 43° 56' 42", W. long. 60° 71' 15"; the E. end in N. lat. 43° 59' 5", W. long. 59° 42'. A considerable sum of money is annually appropriated for the maintenance of an establishment on the island, consisting of a superintendent and assistants, with abundant supplies of every article likely to be required in case of shipwreck. This establishment was formed in 1804, and kept up at the expense of the province until 1827; but in the latter year the British government undertook to furnish a sum equal to that voted by the province, and the establishment has consequently been greatly enlarged, and its usefulness much increased. Its necessity is sufficiently attested by the melancholy fact, that 40 vessels were wrecked there in a few years, and in a single winter 200 people are stated to have perished on its coasts. The surface of the island (according to the state-

ments furnished to Judge Haliburton) is undulating; and the colour is also very similar to that of the sea, from which it is not easily distinguishable. Throughout its whole extent there is not a single tree or shrub, and the only productions to be found upon it are a strong coarse grass, commonly known by the name of bent grass, or sea matweed, whortleberry, and cranberry bushes. The grass is indigenous, and grows near the shore, or in low places; and the cranberry bushes are confined to the deep hollows, which the violence of the wind has formed by scooping out the sand, and driving it into the sea. With these exceptions, the soil, if such it can be called, consists of a naked sand, which is easily acted upon by the tempest, and drifts like snow. In some places it has formed conical hills, one of which is 100 feet high; and notwithstanding its exposure, and the looseness of its texture, continues to increase in bulk. After a gale of wind, human skeletons are sometimes exposed to view, and timber and pieces of wrecks are disinterred, which have been buried for years.

Those who have not personally witnessed the effect of a storm upon this place, can form no adequate idea of its horrors. The reverberating roar of the sea, when it strikes this attenuated line of sand, on a front of 30 miles, is truly appalling, and the vibration of the island under its mighty pressure

seems to indicate that it will separate eventually, and be borne away into the ocean. The whole of the S. end is covered with timber, which has either been drifted thither by the current or torn from wrecks, and driven on shore by the violence of the sea. At each extremity there is an extensive and dangerous bar. The N.W. bar is 16 miles long, and from a mile to a mile and-a-half wide, on the whole of which the sea breaks in bad weather. That on the N.E., which is of the same width as the other, extends 28 miles, and in a storm forms one continued line of breakers. The currents are variable, one especially but little known to seamen, is stated to have been a chief cause of the numerous disasters. There seems reason to believe, that the gulf stream at $42^{\circ} 30'$, running E.N.E. occasions the waters of the St. Lawrence, running S.S.W., to glide to the westward. The strength of the current has never been noted, and three-fourths of the vessels lost are supposed to have thought themselves to the eastward of the island, when, in fact, they were in the longitude of it.

The island is said to be decreasing in size. The spot where the first superintendent dwelt is now more than three miles in the sea, and two fathoms of water break upon it. Although it must occasionally vary, according to the violence of storms and the action of the waters, yet it is thought that the effect of these is perceptible rather on the bars and shoals, than on the island itself, which is diminished by the wind faster than it is supplied by the ocean.

During the summer months, the S.W. wind is so prevalent as to be almost a trade wind, and is attended with the inconvenience to the party residing on it, and the danger to strangers, of being always accompanied by fog. In winter the rigour of the climate is abated by the sea breeze; and snow, though it sometimes falls in heavy showers, is almost immediately blown off into the water. Although the island is a mere strip of sand, it contains a pond 18 miles long, and nearly a mile wide, denominated Lake Wallace, between which and the sea, on the south side, there is a narrow ridge or sea wall, of about 200 yards. This lake, when the island was first discovered, appears to have had the same form as at present; but very many years afterwards a breach was made into it by the sea on the north side, and an inlet formed, which converted it into a very commodious harbour for small coasters. A tem-

pest, similar to that which opened it, closed it again, and blockaded two small American shallops that had sought shelter within it. About the centre of the north side of the lake is the house of the superintendent, which is one story in height, and 40 feet in length by 20 in breadth, near it stand the stores and a large barn. On an adjoining hill is a flag staff, made of the spritsail-yard of the French frigate *l'Africane*, wrecked in the year 1822, from which signals are made to vessels in distress. At each end of the lake is a hut, furnished with provisions, apparatus for striking fire, and directions for finding the house of the superintendent. Two small kitchen gardens are attached to the house, and one place has been found where cabbages can be reared. Rye, oats, and Indian corn, have been frequently sown, but they have never arrived at maturity. The stock of cattle consists of a few horses, some cows and oxen, hogs and poultry. But though the attempt to raise sheep has been often made with every possible care, it has hitherto failed, the climate or the food not being congenial to them. Besides the barn adjoining the house, there is another at the east end of the lake, which is filled with hay made of the beach grass. The family of the superintendent are supplied with firewood by the drift timber found on the south end of the island, which is hauled to the lake and there formed into a raft, and towed to the dwelling-house, for which purpose they are furnished with two excellent whale boats. The water of the island is brackish and of yellowish colour, but is everywhere attainable in the hollows by digging from three to five feet. From an early period there appears to have been a herd of wild cattle upon it. The Portuguese were the first who made this humane provision for the unfortunate, by landing some calves, which increased in a few years to such an extent, as to induce unprincipled men to hunt them for the sake of their hides and tallow, and in some instances to remove them alive. The disreputable nature of the employment, and the danger attending a protracted visit on the island, were such, that they were not exterminated for more than a century. After this it was again stocked, but the cattle shared the same fate as those which had been previously placed there. At a subsequent period, a French clergyman, at Boston, named Mr. le Mercier, who called himself an Englishman by naturalization, sent cattle thither, and proposed to remove there

himself. Among the records of the province, there is an application from him to lieutenant-governor Armstrong, at Annapolis, for a grant of the island, but as he declined to accept it on the terms proposed, of paying a quit rent to the king, it was finally withheld. A proclamation, however, was issued by the governor, forbidding people to kill these animals, and they continued there for many years, but at what time they were destroyed and succeeded by the horses now upon it, is not known, nor is it ascertained whether the latter are the descendants of some sent there by him, or of others which have escaped from wrecks. Since the formation of the establishment, and the protection afforded them by it, they have greatly increased in number. They are small, but strong and active, and endure, with surprising hardihood, the inclemency of the weather in winter, without any other shelter than that afforded by the hillocks of sand. The south end of the island is their general resort, on account of the quantity of grass on its shores, and its remoteness from the house of the superintendent. They have increased beyond their means of subsistence, and although many are killed every year to supply fresh provisions for the crews of wrecks, who are detained there until an opportunity offers for conveying them to Nova Scotia, yet several of the aged and infirm are generally found dead every spring. They are exceedingly wild, and it is no easy matter to approach within gun-shot of them. As it is desirable that no ineffectual efforts should be made to shoot them, and that they should not be unnecessarily maimed or wounded, great care is taken by the marksman to secrete himself in a suitable place, until an animal approaches within a convenient distance, when one shot usually suffices to kill him. The young male horses are selected for slaughter, and are easily distinguished from the aged by their superior condition, and by the size of the mane, which in the old horses is of extreme length, reaching nearly to their knees. The meat is said to be tender and by no means unpalatable. The island is also well stocked with English rabbits, which make an agreeable variety in the food of the residents. The nature of the soil is so peculiarly adapted to the habits of these animals, that they have multiplied astonishingly, and are prevented from becoming too numerous only by a similar increase of rats, the progeny of those that have escaped from wrecks. Great numbers of the latter perish

in the course of the winter, and during the rainy weather of the spring and autumn. Until within the last 15 years, there was a small herd of wild hogs, that became exceedingly fierce. The climate, however, which had always restricted their increase, finally overcame them altogether, for the whole perished during an unusually severe winter. Since that time it has not been thought advisable to renew this species of stock, which, considering the nature of the food that shipwrecks must sometimes have unfortunately furnished them, must always have been objects of horror and disgust. During the early part of the summer, gulls, ducks, divers, and other wild fowl, lay an immense quantity of eggs on the southern point, and a party from the house frequently sail up the lake and fill their boat with them. At the approach of winter these birds migrate to the continent.

Soon after the settlement of the New England colonies, this place became a favourite resort of fishermen for the purpose of killing morse and seal. The former are nearly exterminated, but the latter still afford, during the season, a favourite employment to the people of the superintendent. They are of the species "*Phoca Ursina*;" the male is sometimes eight feet long, and 800 pounds in weight; but the female is much smaller. The colour of the former is nearly black, and of the latter a dark speckled brown. Their hair is long and rough, and on the neck of the male is upright, and a little longer than the rest. The fore legs are about two feet long, and the hinder ones twenty-two inches, the feet being divided by five toes, separated by a large web, and spreading to the extent of twelve inches. They are prodigiously strong, swimming at the rate of seven miles an hour, and are very tenacious of life, often surviving the most severe wounds. When on shore they live in families, each male being attended by several females, whom he guards with great jealousy. The young ones, at twenty days old, are nearly white, and their flesh bears a resemblance to that of sucking pigs. The males, when old, are deserted by the females. They then live apart from the rest, and become exceedingly fierce and quarrelsome. Their contests are often violent and sanguinary, and they inflict wounds on each other, not unlike the cuts of a sabre. At the termination of one of these battles, they throw themselves into the sea to wash away the blood. Although by no means so numerous as they were in for-

mer years, they still resort to the island in great numbers. They arrive on the north-east bar about the middle of January, for the purpose of whelping, and remain there for the space of a month; when the puppies are about twenty-five days old, preparations are made for attacking them. Each person is armed with a club five or six feet in length, made of oak or ash, the butt being transfixed with a piece of steel, one end of which is shaped like a spike, and the other formed into a blade. As the seals seldom advance beyond the summit of the bar, so as to avail themselves of its declivity to facilitate their descent into the sea, the assailants approach with great caution and silence, and when within about 200 yards, rush in between them and the water, and commence the attack. Each man selects the largest as the object of his particular pursuit, and strikes him, on the back part of the head, several blows with the steel spike. He then applies the blade, in the same manner, to the wound thus inflicted, and repeats the blows till the animal is brought to the ground. The strength and fierceness of this species of seal is so great, that this attempt is not unaccompanied with danger, and when they turn on their pursuer, they often ward off the blow with much dexterity, and have been known to seize the club in their mouth and escape. An ordinary hand-spike would be altogether unavailing, and a musket equally so. When driven off this shoal, they land again on the north-west bar, where they are pursued in the same manner, after which they disappear altogether until the ensuing year. The chief value of the seal consists in the oil. When the animal is killed, the fat is peeled off with knives. The skin of a full-grown seal is worth about five shillings, and that of a whelp about one shilling and sixpence. The proceeds of the sale, both of the skins and the oil, go towards the funds of the establishment.

THE MAGDALEN ISLANDS are situated 18 leagues N.W. of Cape Breton, the same distance northward of Prince Edward Isle; 36 leagues from the nearest point of Newfoundland; 75 leagues from the French settlements of Miguelon and St. Pierre, and 180 leagues eastward of Quebec. With four exceptions they form an almost continuous chain of land, about 42 miles long, in a

nearly N.E. and S.W. direction. Amherst Island, the most southerly of the chain, is nearly oval in form, having about five and-a-half and three and-a-half miles for its axis, with an isolated hill about 260 feet above the level of the sea. Its harbour is the best in the chain, with a narrow but straight entrance over a soft ooze bar, fit for vessels drawing 11 to 12 feet water. Numerous spots of sand almost connect Amherst with Grindstone Island, whose diameter is about five miles. Cape Abright, the next in succession, is about nine miles long and three broad. Then follows Entry and Coffin Islands. The population consists of about 200 families, the greater part of whom are French Acadians—fishermen. Lieutenant Baddely, who examined these islands, thinks them of igneous origin;—first, by reason of the form of the hills of which they are composed;—secondly, on account of their porphyritic, amygdaloidal, vesicular, or lava-like structure;—thirdly, the geological appearances of the sandstone, clays, &c., shown in their displacement, in their redness, and even in their friability. In some places the soil is a rich black mould, as at St. Vincent's, and other volcanic islands in the West Indies.

BRION ISLAND AND THE BIRD ISLANDS, north of the Magdalen islands, have been recently visited by the distinguished ornithologist, Audobon, who thus describes the "Great Gannet Rock," which derives its name from the numerous birds which breed there. Mr. Audobon says:—

"For several days I had observed numerous flocks proceeding northward, and marked their mode of flight while thus travelling.—At length, about ten o'clock, we discerned at a distance a white speck, which our pilot assured us was the celebrated rock of our wishes. After a while I could distinctly see its top from the deck, and thought that it was still covered with snow several feet deep. As we approached it, I imagined that the atmosphere around was filled with flakes, but on my turning to the pilot, who smiled at my simplicity, I was assured that nothing was in sight but the Gannets and their island home. I rubbed my eyes, took up my glass, and saw that the strange dimness of the air was caused by the innumerable birds, whose white bodies and black-tipped pinions produced a blended tint of light-grey. When we had advanced to within half a mile, this magnificent veil of floating Gannets was easily seen, now shooting upwards, as if intent on reaching the sky, then descending as if to join the feathered masses below, and again diverging toward either side and sweeping over the surface of the ocean."

BOOK III.—NEW BRUNSWICK.

CHAPTER I.

GEOGRAPHICAL POSITION, BOUNDARIES, AREA, AND HISTORY.

POSITION AND AREA.—New Brunswick forms an eastern section of the American continent, and is situated between $45^{\circ} 5'$ and $48^{\circ} 20'$ N. lat., and between $63^{\circ} 50'$ and 68° W. long. It is bounded on the N. by Chaleurs Bay, in the Gulf of St. Lawrence (which separates it from the district of Gaspé), and by the Ristigouche River, which, in its whole course, from its source to its estuary in Chaleurs Bay, divides the province from the county of Bonaventure in Lower or Eastern Canada;* on the S. and S.E. by the Bays of Fundy, Chignecto, and the narrow peninsula which prevents Nova Scotia from being entirely insulated; the county of Westmoreland in New Brunswick being divided from that of Cumberland in Nova Scotia only by a boundary line drawn from Fort Cumberland to Bay Vert in Northumberland Straits (an arm of the Gulf of St. Lawrence); on the E. by Northumberland Straits, which separates it from Prince Edward Island and the Gulf of St. Lawrence; and on the E. by the territories of the United States. The boundary line is so often a matter of discussion, that it may be acceptable to give verbatim the first article of the treaty of 1842 (commonly known as the Ashburton Treaty) by which it was finally arranged.

"It is hereby agreed and declared, that the line of boundary shall be as follows:—Beginning at the monument at the source of the River St. Croix, as designated and agreed to by the commissioners under the Fifth Article of the Treaty of 1794, between the governments of Great Britain and the United States; thence north, following the exploring line run and marked by the Surveyors of the two Governments in the years 1817 and 1818, under the Fifth Article of the Treaty of Ghent, to its intersection with the river St. John, and to the middle of the channel thereof; thence up the middle of the main channel of the said river St. John to the mouth of the river

St. Francis; thence up the middle of the channel of the said river St. Francis, and of the lakes through which it flows, to the outlet of the Lake Pohenagmook; thence south-westerly, in a straight line, to a point on the N.W. branch of the river St. John, which point shall be ten miles distant from the main branch of the St. John, in a straight line and in the nearest direction; but if the said point shall be found to be less than seven miles from the nearest point of the summit or crest of the highlands that divide those rivers which empty themselves into the river St. Lawrence from those which fall into the river St. John, then the said point shall be made to recede down the said N.W. branch of the river St. John, to a point seven miles in a straight line from the said summit or crest; thence in a straight line, in a course about S., eight degrees W., to a point where the parallel of latitude of $46^{\circ} 25' N.$, intersects the S.W. branch of the St. John's; thence southerly by the said branch, to the source thereof in the highlands at the Metjarmette Portage; thence down along the said highlands which divide the waters which empty themselves into the river St. Lawrence, from those which fall into the Atlantic Ocean, to the head of Hall's Stream; thence down the middle of said stream, till the line thus run intersects the old line of boundary surveyed and marked by Valentine and Collins previously to the year 1774 as the 45th degree of N. latitude, and which has been known and understood to be the line of actual division between the States of New York and Vermont on one side, and the British Province of Canada on the other; and from said point of intersection W. along the said dividing line, as heretofore known and understood, to the Iroquois, or St. Lawrence River."

The province is in form an irregular square, contains about 26,000 square miles, and has a sea coast 500 miles in length.

HISTORY.—The early history of New Brunswick is comprehended in that of Nova Scotia. Under the dominion of France it formed a portion of Acadia or New France, and its first settlements (of which the records are in general vague and unsatisfactory) appear to have been almost entirely confined to military posts on the St. John, and those at Chignecto and Bay Verte. Dr. Gesner,

* The boundary between New Brunswick and Canada is imperfectly defined. From the western extremity of Chaleur Bay, the river Ristigouche was adopted instead of "a line along the high lands which divide the rivers that empty themselves into

the river St. Lawrence from those which fall into the sea, to a point in the 45th degree of N. latitude." But the Ristigouche River divides into two streams, which have different sources. [See Map of New Brunswick on Map of Eastern Canada.]

in his recent and valuable "History of New Brunswick," from which I have obtained much interesting detail, says, that the first attempt at the colonization of the northern part of New Brunswick was made in 1639. In 1672 a number of French families emigrated to the river Miramichi, and soon after several small settlements were formed in different places, and a fortified town called Petite Rochelle, was commenced near the mouth of the Ristigouche. At Beaubair's Point and on the island of that name (so called in honour of the governor or superintendent of the colony, Monsieur Beaubair), considerable settlements were formed, and some traces of cultivation still remain. The settlers employed themselves chiefly in hunting and fishing, and had an extensive export trade, which continued prosperously until 1757, when it was greatly interrupted by English cruisers on the coast. In the same year their crops failed, and the succeeding winter they were reduced to a state of starvation. To the horrors of famine were added those of a pestilence, supposed to have been introduced by a vessel wrecked near the mouth of the Baie des Vents River, the remains of which are still to be seen. Two transports were despatched from France with supplies, for the relief of these unhappy people, but the vessels were captured by the British fleet, and 800 of the inhabitants perished. From the wearing away of the banks of the river at Beaubair's Point, where great numbers of them were buried, many graves have been opened; and in 1842 the bones of the early French emigrants were seen protruding from the soil, where, at present, a highway descends to the ferry crossing the N.W. branch of the river. Most of the habitants who survived fled to Chaleur Bay, St. John's Island, and Memnancook on the Peticodiac. Only a few colonists remained at French Fort Cove, Canadian Point, and Nequaak, which were the principal rallying points for the savages.

After the conquest of Quebec, a vessel, having on board the remains of General Wolfe, was driven, by stress of weather, into Miramichi river. The captain sent a boat and six men on shore to procure water. The boat landed at Henderson's Cove: the men were suddenly surrounded by a party of armed Indians and soldiers from the fort, and murdered upon the spot. The captain of the vessel, on being informed by the pilot of this barbarous massacre, retaliated with almost equal brutality. After silencing

the battery at the Cove, he destroyed the settlement at Canadian Point, and, it is said, he there put to death the miserable survivors of the famine and the pestilence. In proceeding to sea he landed at Nequaak, and set fire to a large church, from which circumstance the settlement has been ever since called Burnt Church.

In 1760 a French fleet was sent to attempt the recovery of Canada, which being pursued by the British squadron, took refuge in the Ristigouche, at the town of Petite Rochelle, where there were two batteries. Captain Byron, the British commander, having with difficulty worked his ships up the river, forced the enemy to an engagement, and succeeded in capturing and destroying the whole fleet. He then demolished the town, and razed the fortifications to the ground. The remains of two French vessels may still be seen at low-water near Mission Point, where several pieces of cannon are partially buried in the sand. At the site of Petite Rochelle, muskets, swords, bombshells, with a variety of other warlike instruments, have been found; and among the ruins of the town, china, silver forks and spoons, and other articles of luxury, have been discovered, evidencing the advanced state of civilization of its former inhabitants.

About 1761, settlers from Great Britain and the adjoining colonies began to flow into the province. In 1764, the first British settler, a Mr. Davidson, emigrated from the north of Scotland to Miramichi, and in the following year obtained from the British government a grant of 100,000 acres, situated on the south-west branch of the Miramichi. He was afterwards joined by a Mr. Cort, from Aberdeen, and they soon established a valuable trade. The fishery annually yielded them from 1,400 to 1,800 tierces of salmon, and they lived upon good terms with the Indians until the commencement of the American revolution, when the savages declared themselves in favour of the revolutionists, plundered their stores, and decreed the death of every individual belonging to the infant settlement. The arrival of the Viper sloop-of-war prevented the contemplated massacre. Thirty of the Indians attempted to capture the vessel, part of whom perished in the attempt, and the remainder were taken prisoners and sent to Halifax. On a subsequent occasion the colony was saved from destruction by the exertions of a Roman Catholic priest, named Cassanette. The first English settlement on

the St. John was formed by some families from Massachusetts, who, having obtained from government the grant of a township on that river, immediately established themselves in the district now known as the County of Sunbury. At different times during the war they were joined by American loyalists and refugees. The first commission of the peace for this settlement is dated 11th of August, 1766, and the Courts of Common Pleas were held in Sunbury until 1783, when Fredericton was made the seat of government. The population at this period amounted to 800 souls.

In 1783 several thousands of disbanded troops were removed from New England to New Brunswick, and a number of Acadians who had established themselves at Fredericton were removed to Madawaska to make room for them. Even here the Acadians have not escaped the vicissitudes of fortune; for according to the boundary line laid down in 1842, one part of Madawaska district is assigned to Great Britain, and the other to the United States, and the divisional line has consequently placed the same people under two different governments.

In 1784, New Brunswick was separated from Nova Scotia, and made a distinct province. General Carleton was appointed governor, and by his judicious—his paternal administration—for nearly 20 years, he raised the country from almost the state of a wilderness to comparative civilization. In the year 1809, the duty on Baltic timber was advanced to £2 14s. 8d. per load, while that from the colonies was left free. The exportation from New Brunswick thereby received a great stimulus, and rapidly increased until 1825, when, from speculative over-trading, it experienced a severe check, from which, however, it recovered, and became as thriving as before. It has recently been again depressed.

In 1826, the east coast of Miramichi was visited by an awful conflagration, of which the following description, by an eye-witness (Mr. Cooney), may probably be acceptable to those who, never having been out of Europe, have probably but little idea of the fury and rapidity with which fires rage after a continuation of hot seasons in North America and New Holland, when the dry underwood and fallen leaves, in addition to the resinous quality of the timber, afford combustible materials in the greatest abundance:—

"The summer of 1825 was unusually warm in both hemispheres, particularly in America, where its effects

were fatally visible, in the prevalence of epidemical disorders. During July and August, extensive fires raged in different parts of Nova Scotia, especially in the eastern division of the Peninsula. The protracted drought of the summer, acting upon the aridity of the forests, had rendered them more than naturally combustible; and this facilitating both the dispersion and the progress of the fires that appeared in the early part of the season, produced an unusual warmth. On the 6th October, the fire was evidently approaching Newcastle; at different intervals fitful blazes and flashes were observed to issue from different parts of the woods, particularly up the N.W., at the rear of Newcastle, in the vicinity of Douglastown and Moorfields, and along the banks of the Bartibog. Many persons heard the crackling of falling trees and shriveled branches, while a hoarse rumbling noise, not dissimilar to the roaring of distant thunder, and divided by pauses, like the intermittent discharges of artillery, was distinct and audible. On the 7th of October the heat increased to such a degree, and became so very oppressive, that many complained of its enervating effects. About 12 o'clock a pale sickly mist, lightly tinged with purple, emerged from the forest, and settled over it.

"This cloud soon retreated before a large dark one, which occupying its place, wrapt the firmament in a pall of vapour, and the heat became tormentingly sultry. There was not a breath of air—an irresistible lassitude seized the people; and a stupifying dullness seemed to pervade every place but the woods, which trembled, and rustled, and shook with an incessant and thrilling noise of explosions rapidly following each other, and mingling their reports with a discordant variety of loud and boisterous sounds. At this time the whole country appeared to be encircled by a fiery zone, which gradually contracting its circle by the devastation it made, seemed as if it would not converge into a point while anything remained to be destroyed. A little after four o'clock an immense pillar of smoke rose in a vertical direction, at some distance N.W. of Newcastle, and the sky was absolutely blackened by this huge cloud; but a light northerly breeze springing up, it gradually distended, and then dissipated into a variety of shapeless mists. About an hour after, or probably at half-past five, innumerable large spires of smoke, issuing from different parts of the woods, and illuminated by flames, that seemed to pierce them, mounted to the sky.

"The river, tortured into violence by the hurricane, foamed with rage, and flung its boiling spray upon the land. The thunder pealed along the vault of heaven: the lightning appeared to rend the firmament. For a moment all was still, a deep and awful silence reigned over everything. All nature appeared to be hushed, when suddenly a lengthened and sullen roar came booming through the forest, driving a thousand massive and devouring flames before it. Then Newcastle, and Douglastown, and the whole northern side of the river, extending from Bartibog to the Naashwaak, a distance of more than 100 miles in length, became enveloped in an immense sheet of flame, that spread over nearly 6,000 square miles! That the stranger may form a faint idea of desolation and misery which no pen can describe, he must picture to himself a large and rapid river, thickly settled for 100 miles or more, with four thriving towns, two on each side of it, and then reflect that these towns and settlements were all composed of wooden houses, stores, stables, and barns; that these

barns and stables were filled with crops—and that the arrival of the fall importations had stocked the warehouses and stores with spirits, powder, and a variety of combustible articles, as well as with the necessary supplies for the approaching winter. He must then remember that the cultivated, or settled part of the river, was but a long narrow stripe, about a quarter of a mile wide, lying between the river and almost interminable forests, stretching along the very edge of its precincts, and all round it. Let him then animate the picture by scattering countless tribes of wild animals; hundreds of domestic ones; and even thousands of men through the interior. Having done all this he will have before him some idea of the extent, features, and general circumstances of the country, which, in the course of a few hours, was suddenly enveloped in fire. A more ghastly, or a more revolting picture of human misery, cannot be well imagined. Nothing broke upon the ear but the accents of distress; the eye saw nothing but ruin, and desolation, and death. Newcastle, yesterday a flourishing town, containing nearly 1,000 inhabitants, was now a heap of smoking ruins; and Douglastown was reduced to the same miserable condition. Of the 260 houses and storehouses that composed the former but 12 remained; and of the 70 that composed the latter but 6 were left. The confusion on board of 150 large vessels then lying in the Miramichi, and exposed to imminent danger, was terrible—some burnt to the water's edge—others burning—and the remainder occasionally on fire. Dispersed groups of half-famished, half-naked, and houseless creatures, all more or less injured in their persons; many lamenting the loss of some property, or children, or relations and friends, were wandering through the country. Of the human bodies some were seen with their bowels protruding, others with the flesh all consumed, and the blackened skeletons smoking; some with headless trunks and severed extremities—others reduced to ashes—many bloated and swollen by suffocation, and lying in the distorted position of their last agonizing convulsions. Brief and violent was

their passage from life to death: rude and melancholy their sepulchre—unknelled, uncoffined, and unknown. Upwards of 500 human beings perished. Thousands of wild beasts, too, had been destroyed in the woods, and from their putrescent carcasses issued streams of effluvium and stench. Domestic animals of all kinds lay dead and dying in different parts of the country; myriads of salmon, trout, bass, and other fish, which poisoned by the alkali formed by the ashes precipitated into the river, now lay dead, or floundering and gasping on the scorched shores and beaches; and the countless variety of wild fowl and reptiles shared a similar fate. Such was the awful conflagration at Miramichi, which elicited the prompt benevolence of very many philanthropists in the Old and New World, who subscribed £40,000 for the relief of the survivors, whose property, to the extent of nearly a quarter of a million, was destroyed."

Administrators of the Government of New Brunswick.

T. Carleton, Governor-in-Chief	1784
G. G. Ludlow, President	1786
E. Winslow	1803
Lieutenant-Colonel G. Johnston	1808
General M. Hunter	1809
General W. Balfour	1811
General M. Hunter	1812
General G. S. Smyth	1812
General Sir T. Saumarez	1813
General G. S. Smyth	1814
Lieutenant-Colonel H. W. Hailes	1816
General G. S. Smyth, Lieutenant-Governor	1817
Ward Chipman, President	1823
J. M. Bliss	1824
General Sir H. Douglas, Lieutenant-Governor	1829
W. Black, President	1831
General Sir A. Campbell, Lieutenant-Governor	1831
General Sir J. Harvey	1837
Colonel Sir W. E. Colebrook	1841
Sir E. W. Head, Bart.	1848

CHAPTER II.

TOPOGRAPHY, DESCRIPTION OF THE COUNTIES AND CHIEF CITIES, GEOLOGY, MINERALOGY, SOIL, TIMBER TREES, AND CLIMATE.

PHYSICAL ASPECT.—New Brunswick presents much variety of scenery, and is marked by several distinguishing features. The greater part of its surface undulates boldly, forming several continuous ridges of high land, as, for instance, that which extends from Maine, in the United States, to Mars Hill, and from thence stretches across the country in a N.E. direction, and sending off a branch to the Ristigouche, nearly reaches Chaleurs Bay. The elevations in this and other ranges are seldom of any considerable height,

yet their precipitous acclivities, sharply defined outline, and deep ravines, give them an Alpine character, while the rich valleys, sheltered plains, and noble forests, through which rivers and lakes wind in every direction, offer many a cheering prospect to the eye of the intending settler, by the promise they offer of speedy and abundant return to diligent labour. The greater part of New Brunswick is still an uncultivated, though beautiful wilderness, containing abundance of fine timber and extensive prairies; of its

general aspect it is therefore difficult to form, much more to convey, any satisfactory idea, except by describing the leading features of the counties, which are in general marked by natural, rather than artificial limits.

The chief river, the St. John, which rises in the territory of the United States, near the source of the Connecticut, and entering New Brunswick in or near 47° N. lat., flows in a semicircular form through the province until it disembogues in the Bay of Fundy in $45^{\circ} 20'$ N. lat., and 66° W. long. For 85 miles, up to Fredericton, it is navigable for vessels of 50 tons; thence barks of 20 tons can ascend to the Grand Falls, which are 125 miles higher, above them it is only useful for boats. The Miramichi is second only to the St. John in extent and importance, and with its numerous tributaries drains a vast tract of country. Three of the N.W. branches spring from a chain of lakes in the Upper Tobique country, and descending with rapidity traverse the forests of the S.W. for nearly 200 miles, then uniting the Miramichi becomes navigable for large vessels, and, at length, falls into the fine bay of the same name in 47° N. lat., and $64^{\circ} 53'$ W. long. The Ristigouche is also a fine stream, and will be noticed when examining the district which it waters. New Brunswick now contains 13 counties, and as the population increases others will doubtless be created; according to Dr. Gesner, there is still sufficient space for a county in the vicinity of the Grand Falls, one on the Tobique River, and one or two in the district of the Ristigouche. The names of the counties are, Gloucester, Northumberland, Kent, Westmoreland, St. John's, Charlotte, King's, Queen's, Sunbury, York, Carlton, Ristigouche, and Albert. Gloucester, Northumberland, and Kent, originally formed one county, called Northumberland, which extended over an area of 8,000 square miles, and possessed a river frontier from the source of the Ristigouche to Dalhousie Harbour, at the head of Chaleurs Bay, and from thence a seaboard along the S. side of the bay to the gulf coast of Shediac Island. Other counties have also been re-divided.

St. John's County extends along the northern shore of the Bay of Fundy for nearly 90 miles, its average breadth being about 10 miles. It contains the parishes of Portland, Carlton, Lancaster, St. Martin's, and Simonds. The coast line is almost entirely composed of barren rocks, especially in the

large parish of St. Martin, but owing to the vicinity of the city of St. John, the land in this county has been very carefully cultivated, and in the valleys and less elevated parts, good crops of oats, potatoes, and turnips are raised, and considerable advance has been made in the culture of wheat. Some excellent samples of turnips were exhibited in 1846, and the produce of the fields where they were grown, was stated to be at the rate of 800 bushels per acre.

The city of St. John in $45^{\circ} 20'$ N. lat., $66^{\circ} 3'$ W. long., is built on a rocky peninsula projecting into the harbour at the mouth of the noble river of the same name, and from its favourable position is the emporium of the inland trade of a great part of New Brunswick. Much labour has been employed in levelling the streets, but several of them are still inconveniently, and in winter even dangerously steep. That division of the city nearest the entrance of the harbour, is called Lower Cove. The principal wharfs, docks, and warehouses are situated farther to the north. The whole shore is lined with timber ponds, booms, and ship-yards, which receive the numerous rafts floated down the river. It is an incorporated city, divided into six wards, governed by a mayor, recorder, aldermen, sheriff of the county, coroner, common clerk, &c. St. John's has risen into opulence with as much rapidity as any city in North America. But little more than 60 years ago, the site of St. John was a rocky headland, covered with cedar thickets. By the patient industry of American loyalists, the foundation of its present prosperity was established. The streets are regularly, and on the whole well built. The numerous public buildings of stone, brick, and wood are many of them remarkable for their excellent structure. In 1837, a destructive fire consumed 115 houses and stores. The loss was estimated at £250,000. Several severe fires have occurred since, and whole streets, including the north and south market wharfs, and a new market-house, have been laid in ruins. The extreme point of the peninsula is occupied by two batteries, military stores, and barracks. Steam-boats ply night and day between St. John's and Fredericton.

Carlton, a town on the W. side of the harbour, is included in the city, and contains several good streets. The harbour of St. John is safe, commodious, and open at all seasons of the year. At its mouth lies Partridge Island, on which is a battery, light-house, and hospital for the reception of the

sick emigrants and sailors on their entering the quarantine station. Between the island and the mainland, is a long narrow bar, dry at low water, and on the bar is fixed a beacon crowned by an excellent light. The fishery here is very productive. The population of the city of St. John in 1840, was 20,716, but the suburb of Portland would add at least 5,000 to that number.

Portland continues to increase, and Mr. Perley, in his official returns, dated January, 1847, estimates the city of St. John with the suburb of Portland, at 30,000, and the rest of the county at 8,000 souls, in all 38,000 souls—about equal to one-fifth of the whole population of the province. The river St. John, before its entrance into the harbour, passes through a fissure in the solid rock, which exhibits every appearance of having been occasioned by some convulsion of nature. The volume of water collected in a course of many hundred miles being compelled to pass through a channel only 150 yards wide, rushes downwards with extreme velocity, forming the falls, which are simply a sluice on a grand scale. Dr. Gesner says, "that the ordinary tides of the harbour rise below the falls 26 feet; above the falls, their common elevation is only about 18 inches; therefore, the height of the fall outwards is 24 feet 6 inches. But the entrance of the river at the gorge is too narrow to admit the sea on the flood-tide to flow in freely, and therefore there is the singular occurrence of a fall inwards at high water, and a fall outwards at low water. The time for vessels to pass through the narrow opening or fall, is fixed at three quarters of an hour at each ebb and flood, or when the sea and river are both at the same level." Musquash Harbour, to the S.W. of St. John's, is a safe and beautiful haven, two miles long, and half a mile wide.

Charlotte County occupies the S.W. angle of New Brunswick, and is separated from the United States by the River St. Croix. It contains ten parishes; viz., St. Andrew's, St. Stephen's, St. David's, St. George's, St. Patrick's, St. James's, Pennfield, Grand Manan, West Isles, and Campo Bello. It is a hilly country, with ridges of granite rocks along its northern boundary; but it possesses much good land, especially in the valleys of the numerous streams by which it is intersected. The principal parish, St. Andrew's, contains the shire town of the same name, which is conveniently situated for commerce, on a narrow slip of low land at the N.E.

extremity of Passamaquoddy Bay. St. Stephen's, at the head of the navigation of the St. Croix, is a thriving town. The parish of St. George is intersected by the Magaguadavic, and has an excellent harbour called L'Etang. Pennfield parish is chiefly settled by Quakers. Grand Manan Island is situated 12 miles S. of the main land of the United States. It is 25 miles long, with a mean breadth of five, having a number of islets on its N.E. side. A great part of the island is cultivated: the herring fishery is extensively prosecuted on its shores; and, in consequence of its important situation, commanding the entrance to the Bay of Fundy, is extremely valuable, being so far fortified by nature, that a little assistance from art would render it invulnerable. The perpendicular cliffs are, in some places, 600 feet high. Campo Bello Island is, in length, from N. to S., eight miles, with an average breadth of two. It is, for the most part, in a state of cultivation. The harbour De Lute, on the west side, near the north extremity, is large and safe, with a spacious entrance.

Deer Island is twelve miles long and three miles broad. It is partially cultivated, and surrounded by a multitude of small islets. The spacious and beautiful inlet of Passamaquoddy Bay, which separates the sea-coast of New Brunswick from the United States territory of Maine, is studded with numerous islets, some of which are richly wooded. This noble bay has the advantage of being free from ice to a greater extent inland than any other harbour north of New York. The fisheries in this county, in the vicinity of West Isles, Campo Bello, and Grand Manan, are of much importance.

The *County of Westmoreland*, until 1845, included the district south and west of the river Peticodiac, now erected into the county of Albert. It is eminently an agricultural and grazing county, containing extensive dyked marshes, a few small lakes, and occasional peat bogs and swamps. The coast is deeply indented by Shepody Bay and Cumberland Basin; the former receives the Peticodiac, a fine stream, navigable for vessels of 100 tons burden 33 miles. It was called by the French, Petit Coude, (Little Elbow,) from its making, 26 miles from its mouth, a sudden turn at a right angle called the Bend, where the tide flows in and ebbs off in six hours. The east side of the Peticodiac, for 12 miles above its entrance, is occupied by Mic Mac Indians. Dorchester,

the shire town, is well built and thickly populated. A pretty village in its vicinity is called after a Monsieur Believaux, who died at the advanced age of 110 years. Sackville parish borders upon Cumberland Basin. The great Tantamarre marsh is situated on both sides of the river of that name, and is one of the largest collections of fertile sea alluvium in British America, being twelve miles long, and four miles wide. The overflowing of the sea is prevented by dykes thrown up on the margin of the river and across the creeks. Westmoreland extends from the boundary between Nova Scotia and New Brunswick, and across the peninsula. A swelling ridge of land, called Point de Bute, separates a small stream called the Aulac, from the Missiguash, and forms the boundary line between the provinces. Fort Beau Sejour, now called Fort Cumberland, was erected on the south-western termination of the ridge, where it commands the entrance of both streams. On it stands a church and chapel, surrounded by fine farms and rich marshes. Bay Verte (so called from the salt-water grass that grows in the mud and floats on the surface,) is a narrow and shallow estuary, especially at its inner extremity. Shediac parish has a good harbour, near the mouth of which are two beautiful islands. The turn of the tide in the Bay of Fundy exhibits that peculiar phenomenon termed the Bore, which takes place on a much grander scale at the mouths of the Ganges, Indus, and Mississippi. The waters seem to accumulate without advancing, until the waves attain a considerable perpendicular height, and then dash forward with extreme velocity and irresistible force, the loud roar striking terror into the animals on the shore, who fly towards the highlands trembling with alarm.

Albert County.—From its recent organization this county requires but a brief notice. It contains 433,560 acres, of which 233,700 are granted and located. Its population is estimated at 5,660. Its productions are similar to those of Westmoreland. The parish of Hopewell stretches along the shore of Chignecto Bay. Shepody Mountain (as it is called) is the termination of a ridge of high land, extending along the boundary of the St. John from the S.W. The small river of that name ends in a lake, between which and the sea an opening has been made, to allow the tide to flow in and cover a large boggy tract with alluvium.

King's County has a mountainous aspect, being thickly interspersed by hills, steep declivities, and narrow ravines walled in by rocks. The western portion, with the exception of the flourishing parish of Greenwich, is almost in a wilderness state. Kingston, the shire town, is situated on a peninsula, between the Kenebecasis Bay (a branch of the St. John) and Belle Isle Bay, and communicates with the main-land, only in a northern direction, where it adjoins the parish of Sussex; improvements are making rapid progress, particularly in the latter named place, which, from a forlorn and dreary desert, has been rapidly transformed into a lovely and luxuriant valley, smiling with abundant harvests and rich pastures, whilst roads, bridges, and public works attest the enterprising spirit of its inhabitants. The Kenebecasis river is navigable 20 miles for vessels of any burthen, 30 miles for vessels drawing seven feet water, and 30 more for flat-bottomed boats. It has four small branches, the Mill Stream, Smith's Creek, Salmon River, and Trout Creek, which afford facilities for transporting timber, and sites for flour and saw-mills. The parish of Westfield has numerous lakes and streams, and abounds with fine timber. The Nerepis, after passing for 12 miles through marsh and intervalle land, falls into the St. John, which then bends abruptly to the N.E., and runs in a nearly direct line for 16 miles. This straight section of the river is called the Long Reach, and at its head are valuable quarries of excellent granite, which are now being largely worked.

Queen's County lies on both sides of the St. John, and is intersected by two important tributaries of that river, namely, the Washadamoak, the lower part of which may be called a lake from the stillness of its waters, and the Salmon, which empties itself into Grand Lake. This lake is a beautiful sheet of water, 30 miles long, and from 3 to 9 broad, connected with the St. John by a narrow and deep channel called the Gemsec (so often mentioned in the early histories of the province), and with French and Maguapit Lakes by channels opened through the alluvium forming the intervalles. All these lakes and channels are navigable. Gagetown (the shire town) is pleasantly situated at the mouth of the Gemsec, and is the shipping place for the produce of the district. Long Musquash and other islands in this part of the St. John, are planted after the subsidence of the spring freshets, and produce fine crops

The parish of Wickham has increased greatly within the last few years. The western portion of the country is almost wholly uncultivated. The parish of Brunswick contains a few settlers at the north-eastern extremity, but almost its entire surface is shaded by a trackless forest; yet this part, and, indeed, the whole county, has great agricultural capabilities, besides possessing coal fields of considerable extent, and abundance of fine timber, of which it has furnished to the port of St. John large supplies for many years.

Sunbury County lies between Queen's and York, and like them crosses the St. John. The parishes of Manguerville and Sheffield are considered the most productive tracts in the province, in consequence of their being annually overflowed. It is impossible to conceive a scene more luxuriant than they exhibit in the season of harvest; for upwards of twenty miles below Fredericton there is scarcely an unimproved spot on the banks of the St. John, through which run a chain of islets as fertile as the mainland. Burton and Lincoln parishes are situated on highlands, with valuable slips of intervale, the whole of which are in a high state of cultivation. At Manguerville the first British settlement in New Brunswick was planted, and another very early one was formed at the mouth of the Oromucto, where there is now a large village, formerly a resort of the Indians, whose graves are sometimes exposed by the operations of the plough. Ship-building, to some extent, is carried on here. On the north and south branches of the Oromucto are many thriving settlements..

York County occupies the higher banks of the St. John for about 50 miles, and contains Fredericton, the capital of New Brunswick, which is situated in the parish of the same name, in 45° 57' N. lat., 66° 45' W. long.; 85 miles distant from the sea coast at St. John's. It was formerly called St. Ann's, and was made the seat of government by Sir Guy Carleton, in 1785. The town stands on a plain fronting the river (here three quarters of a mile wide), which, curving boldly, encloses it on two sides; on the S. a range of hills two miles long and half a mile wide surround it; and from the opposite coast, the Nashwaak rolls its broad, and sometimes rapid, stream into the St. John, which to this point is navigable from the sea upwards for vessels of 50 tons burthen.

Fredericton is laid out in blocks of a quarter of an acre square, of which there are

18: the streets are disposed rectangularly, some of them being a mile long, and, for the most part, continuously built on with wooden houses. The public edifices are the Province Hall (where the provincial assembly and courts of justice assemble), the court-house, barracks, government-house, library, church, chapels, and kirk, and many other structures. The population of the parish of Fredericton in 1840, was 4,002 souls; but the city of Fredericton alone, in 1847, was supposed, by Mr. Perley, to contain 6,000 souls.

Above Fredericton, are the parishes of Kingsclear on the S. and St. Mary on the N., both settled by disbanded soldiers. Queensbury parish was laid out originally for the Queen's Rangers, and has prospered well; but Prince William, settled by the King's American Dragoons, has not been equally thriving, the land being much less favourable. An average crop of oats in this county, of the best quality, is said to be 30 bushels to the acre; but in 1846, there were fields in and near Fredericton, which yielded 60 bushels to the acre. The land (comprising 550,000 acres), purchased from the crown by the New Brunswick and Nova Scotia Land Company, is chiefly situated between the St. John and the S.W. branch of the Miramichi. The company have spent large sums in making roads, clearing land, and building houses, mills, and bridges. The greater part of their tract is of excellent quality, much of it consisting of upland intervale, and they offer liberal encouragement to emigrants. The town of Stanley, formed by this company, is, according to Dr. Gesner, yearly increasing in population and prosperity. It is situated on the borders of the Naashwaak, 35 miles above its confluence with the St. John. Douglas parish on the N. side of the St. John, is intersected by the Keswick River.

Carlton County includes all the upper part of the St. John, so far as it flows through British territory. A portion of it containing, by estimate, 2,700,000 acres, has been claimed by the province of Canada, since the settlement of the disputed boundary with the United States. The first parishes, after leaving York, are Woodstock on the W., and Northampton on the E., both granted to provincial regiments disbanded in 1815. The lands of these settlements are well cultivated and exceedingly productive. At the north-western extremity of Woodstock, the Meduxnikeag (a broad, rapid stream, with almost innumerable branches)

empties itself into the St. John; both banks of which, from Woodstock to the mouth of the Tobique, 50 miles above, are more or less in progress of cultivation.

Wakefield parish contains, and is surrounded by flourishing farms. The thriving village of the same name, 12 miles from Woodstock, is very picturesquely situated. The extensive parish of Kent comprises the remaining and least settled part of the course of the St. John. The Presqu'île is a considerable stream; but from its numerous rapids, scarcely navigable, even for canoes. One of its branches bends along the base of Mars Hill, and receives the brooks descending from the side of the mountain. Mars Hill is about five miles and-a-half west of the river St. John, and one hundred from Fredericton; and has a degree of interest attached to it, from the circumstance of its being the point fixed on by the British commissioners as the commencement of the range of highlands forming the boundary of the United States. The mountain is about three miles in length, with a base of upwards of four miles, an elevation of two thousand feet above the sea, and one thousand two hundred above the source of the St. Croix; near the summit it is almost perpendicular. As it is the highest point in its vicinity, the prospect commands a great extent of territory: immediately beneath stretch the vast forests, whose undulations, clothed with the funereal green of the fir, and the brilliant verdure of the birch, resemble stupendous waves, the more elevated spots rising above the others, like towers on the ocean. The mountain chain, of which Mars Hill is only an insulated point, pursues its course to the northward, leaving within its range Bear Mountain and Moose Mountain. Blue Mountain, near the Tobique, is the next eminence of any considerable altitude in this portion of the Alleghany chain. In this county, the St. John receives its largest tributaries, the Tobique from the E., the Ristook or Aroostook from the W. About eighty miles from its mouth, the Tobique divides into four branches. The extreme sources of this river wind "among naked mountains far in the interior, where the native wild animals find a retreat, and the beaver lives in safety within his dwelling." Formerly there were large forests of the valuable white and red pine in the vicinity of this stream, but most of them have been destroyed by fires. Spruce, cedar, larch, are still abundant, and there are also groves

of beech, birch, and maple. The mouth of the Tobique is occupied by an encampment of Melicete Indians. The Aroostook falls into the St. John two miles above the Tobique, and, with its branches and contiguous lakes, will afford a water communication equal to four hundred miles in extent. Fifteen miles above the Tobique, Salmon River (so named from its having formerly abounded in that fish), flows into the St. John. About five miles above are the Grand Falls. The St. John, in the midst of its stately course, is suddenly compressed into a narrow gorge, three quarters of a mile long, flanked by steep and overhanging cliffs, from 100 to 150 feet high, at the termination of which, a ridge of rocks changes the hitherto unbroken volume into one vast body of turbulent foam, which thunders over a perpendicular precipice, 58 feet in height, into a deep vortex among huge black rocks, whence the river rolls out impetuously through a channel still more confined in width than the previous one, forming a succession of cataracts for about a half a mile, the picturesque effect being increased by crags of every form, which, in several places, shroud the water from sight. A sudden turn in the river, at the Grand Falls, forms a little pinnacle, on which a pretty village has been built, which is interesting from its romantic position. The isthmus of the falls is one of the oldest military posts in the province; and since the settlement of the boundary question, the government has commenced clearing land and fortifying this important part of the frontier. Twelve miles above the fall, Grand River, enters the main stream, which, a few miles higher, receives the Madawaska, on whose banks is an Acadian settlement of that name. The soil is fertile, and the population is steadily increasing. It is stated by Dr. Gesner, to include both sides of the St. John, from the Grand Falls to the mouth of the St. Francis, upwards of 40 miles; and he adds, that there are a few groups of farms and clearings beyond these limits. Having briefly surveyed the counties bordering on the Bay of Fundy, upon the St. John and the United States frontier, we proceed to examine those on the coast of the Gulf of St. Lawrence and Chaleurs Bay.

The New Brunswick shore, along the gulf of St. Lawrence, is low and sandy, covered with trees of a stunted growth, and skirted with extensive marshes, large deep mosses and long sand beaches, formed by the conflicting currents of the gulf, and the different

ivers that pierce the shore. The coast line of the magnificent Chaleurs Bay, which is 85 miles long, and from 16 to 30 broad, commencing in 47° 58' N. lat., 64° 30' W. long., is similar to the Gulf shore, but in several places there are perpendicular cliffs of some height.

Kent County, so named in honour of his royal highness the Duke of Kent, extends from Shediac harbour to the south extremity of Miramichi Bay, having about 50 miles of coast, with several small but good harbours. The settlements are chiefly confined to the Gulf shore and the banks of the rivers along the tide-way. The Acadian-French constitute a considerable proportion of the population, and have formed themselves into numerous compact villages. The *Richibucto*, on which is built the shire town of Liverpool, is about 65 miles long, and rolls into the Gulf of St. Lawrence, through a safe and capacious harbour, 43 miles S. of Point Escuminac. In its greatest width at the entrance it is not more than a mile, and often does not exceed 200 feet. The tide flows 22 miles from its mouth, affording a sufficiency of water for large vessels; canoes navigate to its source, whence there is a small portage to the Salmon River, whose source is unknown, but which flows for 80 miles to the S.W., and falls into Salmon Bay, at the head of the Grand Lake in Queen's County. The banks of the *Richibucto*, for nine miles from the sea, are low and sandy, but further inland the country assumes an easy and gradual elevation, indicating by a better growth of timber a more fertile soil. The *Chebuctouche* rises also in Kent County, is 36 miles long, falls into the gulf 20 miles to the south of *Richibucto*, and is navigable for schooners 12 miles from its mouth, to which extent the tide reaches. This river is remarkable for its abundance of large and excellent oysters. The county is divided into nine parishes, two of them are quite uninhabited, and the others but scantily populated; yet much of the land is of good quality, and well adapted for the cultivation of grain. The whole surface is exceedingly level, and, on an average, its elevation does not exceed 20 feet above the sea. The coast affords valuable fisheries. Herring and mackerel are sometimes so abundant, as to be employed in manuring the soil. In the parish of Dundas is the fine harbour of Cockayne; in that of Wellington is Buctouche harbour.

Northumberland County, although those of Kent and Gloucester have been taken from it, is still the largest in the province. The principal river is the Miramichi, which, 40 years ago, was only known to a few fur traders, and is now of considerable importance, owing to the timber trade and fisheries carried on by its hardy and enterprising inhabitants. The Miramichi falls into the Gulf of St. Lawrence in 47° 10' N. lat., 64° 40' W. long., forming at its estuary a capacious bay, enclosing several islands. Chatham, the county town, is situate on the south bank of the Miramichi. On the opposite banks are the towns of Newcastle and Douglas, which have, phoenix-like, risen from their ashes, they and other villages having been entirely destroyed in the terrific conflagration of 1825, (described in p. 222.) Two miles below Douglas town, on the opposite side, is the prosperous village of Nelson, in the parish of that name. Seven miles above Chatham the Miramichi divides into two branches, one running S.W., and the other N.W. The tide extends about 15 miles up the S.W. branch, beyond the point of junction, and the banks are settled nearly 45 miles from the tide-way, up to which point large-sized vessels can load and unload: from hence to the river Tauk, (45 miles,) small craft, lighters, and barges arrive from Chatham and Newcastle, and proceed through the New Brunswick Company's territory, for 40 miles further; the S.W. branch of the Miramichi containing more water, from the junction of the Tauk when it again ascends to the northward, than the Thames from London upwards. The N.W. arm of the Miramichi is more rapid and rocky, and consequently less navigable than the S.W. branch: there is, however, little obstruction to canoe navigation for about 80 miles, to where it meets the tide, 17 miles above the harbour. The source of the S.W. branch is in the county of York, near the Tobique, 12 miles from the St. John: the commencement of the N.W. branch is not known, the country being there little explored. The former is about 189 miles long before reaching the latter (which is 100 miles in length), each of them receive several streams of from 20 to 40 miles long. The sea-coast of the Miramichi is low, but inland the country rises in some places, consisting of extensive and rich intervalles; in others of a rugged rocky description. The country in general has scarcely yet recovered from the deso-

lating effects of the great fire, but the establishment and operations of the New Brunswick Company will, it is to be hoped, facilitate the settlement of so fine a territory.

Gloucester County joins Northumberland on the E. and S., and is bounded on the N. by Chaleurs Bay. From its extensive sea-coast and numerous rivers, this county has great facilities for fishing and lumbering; but its soil and climate are both favourable to agricultural pursuits, especially to the growth of grain. Bathurst (formerly called St. Peter's), the shire town, is pleasantly situated on a beautiful bay of the same name. It was formerly the boundary between the Mohawk Indians of Canada and the Mic Macs of Nova Scotia, and was the scene of many a sanguinary conflict. Four rivers empty themselves into Bathurst harbour, of which the Nepisiguit is by far the most important. This river descends from some lakes near the head waters of the Tobique (with which it is connected by a short portage), and flows in a deep and broad stream for about 20 miles, when its channel, which is of granite, forms a perpendicular cliff 140 feet high, over which it descends by four leaps or steps with great violence. For the rest of its course (about 80 miles) it is a rapid and tumultuous stream, unnavigable except for canoes and rafts. The parish of Saumarez comprises the headland and islands situated between Miramichi and Bay Chaleurs. At the entrance of the bay are the islands of Shippegan and Miscou. The former is 20 miles long, has a tolerably fertile soil, and is inhabited by Acadian French; the latter, forming the extremity of the cape, is 21 miles in circumference. When visited by Mr. M'Gregor in 1819, it was tenanted by a disbanded Highland soldier and his family, three of whom were drowned in attempting to cross to Shippegan. Miscou, Poksodie, and Caraquette Islands, are inhabited by foxes; the two last form a safe entrance to Caraquette Harbour. The coast is low, flat, sandy, and lightly covered with spruce and fir for two or three miles inland. From Miscou to Miramichi, and indeed to Shediac, the coast is skirted by large lagoons, some of them twelve miles long by three miles wide, which facilitate the coast navigation of small craft.

Ristigouche County occupies the most northerly portion of the province. The Ristigouche, or Big River, which rises near Temisquata Lake, and is supposed to be more than 220

miles long, with a general course E.N.E., nourished by numerous tributary rivers and streams, and forming, at its estuary, a large and commodious harbour. The entrance of the Ristigouche is about three miles wide, formed by two high promontories of red sand stone, with a bold opening unencumbered by bar or shoal, and containing upwards of nine fathoms water. Two miles from the mouth is the town of Dalhousie, with a broad river channel six or seven fathoms in depth, which may be said to extend for 18 miles, thus forming a safe and commodious harbour for the largest class ships. About 116 miles from Dalhousie is the compact village called Campbelltown. At upwards of 200 miles from its embouchure whither the tide flows, the Ristigouche is above a mile wide, and from thence, to within 40 miles of its source, it is navigable for barges and canoes. For 70 miles from Chaleurs Bay, the Ristigouche is flanked on either side by two stripes of high but level land, extending generally a mile back with a few prominent elevations, occupying the very edge of the water, and maintaining a position somewhat like the bastions of a fortress. The scenery in this county is exceedingly impressive; wherever the eye wanders nothing is to be seen but an almost incalculable number of lofty hills, interspersed with lakes, rivers, and waterfalls, glens and valleys; some of the mountains are clothed with the tall and beautiful pine—others sustain a fine growth of hard wood; many have swampy summits, and several terminate in rich meadows and plains; in form some are conical, others exhibit considerable rotundity; many lank and attenuated, and not a few of the most grotesque shapes. Sometimes the precipitous banks of the river are 300 feet above its bed, and at every bend, which is about once in six miles, the voyager is deceived with the appearance of entering a well sheltered lake; but at about 70 miles from the sea, the country becomes comparatively level, and all the way to the head of the Ristigouche is a fine, bold, open territory, consisting of a rich upland, skirted with large tracts of intervale, and covered with a dense and unviolated growth of mixed wood, in which large groves of pine are very conspicuous. This fine county is but very thinly settled, a large portion is yet unexplored. Mr. Perley, the active and intelligent government emigration agent for New Brunswick, in a Report dated the 10th of November,

1845, thus speaks of the province as a field for emigrants:—"If the difficulties attendant upon the settlement of a new country be taken into consideration there can be no doubt that much has been effected in New Brunswick, within the brief period which has elapsed since its first settlement by British subjects; yet all that has been done is but comparatively trifling when considered with reference to the extent of country yet ungranted and uncultivated, and the abundant resources it possesses. As a field for the pursuits of agriculture, the prosecution of commercial enterprise, and the formation of flourishing settlements, this colony offers powerful inducements. It is blessed with a rich and productive soil; it abounds with trees of the greatest utility and value, and it is watered by innumerable rivers and streams. It rejoices in skies that are bright and cheerful, and a climate salubrious in the extreme, congenial to the growth not only of the necessities but many of the luxuries of life: above all, it has the happiness to enjoy British institutions and forms of government modelled upon their prototypes in the mother country, which secure British laws and British freedom to all its inhabitants."

GEOLOGY.—New Brunswick presents the same general course which the principal formations of North America assume; namely, a direction of the rocky strata from S.W. towards the N.E., or *vice versa*, or on lines parallel to the border of the Atlantic. A spur of the Alleghany chain of mountains enters New Brunswick, crosses the river St. John, forms Mars Hill and other eminences, extends in a N.E. direction to the sources of the Miramichi, and other rivers, and gradually disappears towards the Chaleur Bay. Another slightly elevated ridge crosses the Schoodic river and Cheputnec-ticook lakes, to the Bull Moose Hill in King's County. Mr. Gesner says, these elevations form anticlinal ridges, against which the stratified masses lean, or they border immense troughs, containing the secondary and tertiary formations. They are chiefly composed of granite, sienite, trap rock, and porphyry.

In a country so little cleared, its minute geological features must necessarily be imperfectly known. A granite ridge crosses the Cheputnec-ticook river and lakes, and sends off a branch that finally reaches the St. John. Granite also occupies large tracts in Northumberland and Gloucester, and ap-

pears on the banks of the Nepisiguit. A belt of sienite and trappean rocks—ten miles in breadth, and at a distance of ten miles from the Bay of Fundy reaches from the Kennebecasis along the northern boundary of the county St. John, to the new county of Albert. The Silurian rocks, which include red and dark-coloured flags and slates, sandstone, freestone, shelly, and compact limestone, black and lead-coloured shales, concretionary limestone, and grey micaceous sandstone are found in various places, generally running from S.W. to N.E., and highly inclined.

Mr. Gesner enumerates the following as the principal useful rocks and minerals of New Brunswick:—

Granite, sienite, roofing slate, porphyry, mica slate, talcose slate, limestone, hydraulic limestone, marble, alum slate, coal, graphite (or plumbago), ochres, iron ores (abundant), manganese ores, galena (or lead ore), grindstone, freestone, sulphuret of copper, amethyst, agate, jasper, hornstone, thompsonite, stilbite, apophyllite, hornblende, feldspar, chlorite, garnets, talc, asbestos, magnesite, carbonate of lime, sulphate of barytes, gypsum, potter's clay, fire clay, sulphate of iron, tourmaline, serpentine, iron sand, iserine.

Springs.—Salt, sulphurous, carburetted hydrogen, ferruginous.

The Silurian rocks frequently contain organic remains, and in a section on the Ristigouche River and Chaleur Bay, Mr. Gesner noted the following features in descending order:—

STRATA.		ORGANIC REMAINS.
Impure grey and blue limestone	}	Producta spirifera, orthocera, trilobites.
Calcareous and argillaceous shales		Crinoidea, Cyathophyllum turbinum.
Earthy rotten shale	}	Atrypa aspera, with numerous testacea and corals.
Wenlock limestone.		
Compact blue limestone.		
Friable sandstone.		
Shelly limestone.		
Compact blue and grey impure limestone in black, blue, and red shale	}	Producta, terebratula, Cyathophyllum turbinum, Cyathophyllum hexagonum.
Grey and brown sandstones		Encrinal remains.
Compact limestone	}	Tentaculites ornatus, producta, terebratula, corals.
" sandstone		
Argillaceous and calcareous slates	}	Encrinal remains.
Coralline marbles		Corals.
Conglomerates		No organic remains.
Clay slate		No organic remains.

The carboniferous series, viz.; conglomerates, sandstones, shales, limestone, clay-iron stone, coal, and trap, similar to those of the coal-fields of Great Britain, extend along the

coast in nearly horizontal strata, and in the interior, especially at Westmoreland, are inclined in angles varying from 20° to 40° .

MINERALS.—New Brunswick possesses an extensive coal-field, which commences at Bay Verte, and crosses the isthmus between Nova Scotia and New Brunswick. It occupies the whole of the counties of Kent and Sunbury, the chief part of Queen's, York, and Northumberland, a part of Albert County, and nearly all Westmoreland: on its S. side it is 145 miles in length; on its N.E. about 110 miles: the area is estimated at 7,500 to 10,000 square miles, or nearly one-third part of the whole area of the province. This immense coal-field presents a low and level surface, excavated by water-channels, and, in general, not elevated more than 40 feet above the level of the sea. The coal, so far as known, is bituminous. A variety of cannel coal has been found in Albert County. The contemplated line of railway from Halifax to Quebec would intersect this coal-field, and open a vast tract of country for settlers.

A deposit of copper ore has been discovered on the banks of the Nepisiguit River, in the county of Gloucester, by Mr. Stevens. The metal, a green carbonate, is seen cropping out at the surface, nearly in a horizontal bed, about eight inches in thickness. A specimen, assayed in Cornwall, produced 53 per cent. of very fine pure copper. Mr. Frederick Burr states, that the green carbonate is most singularly intermixed with, or disseminated through, a thin stratum of imperfect coal or lignite, much in the same manner that the metallic ores are usually blended with their accompanying vein-stones. An approach may, however, be observed to parallelism between the carbonate of copper and the enclosing layer of coaly matter. The specific gravity of the ore differs, of course, in proportion to the quantity of copper contained in the specimen, which is generally full one-half of the entire mass, but appears to vary from rather more than two and-a-half to about three.

Both the upper and under surfaces of this remarkable bed are very distinct and well defined, exhibiting the fibrous and vegetable structure of the lignite. It is covered by a few feet of alluvial soil, and rests on a thin stratum of conglomerate, containing rolled pebbles, which, at this point, covers the prevailing formation of the tract, a reddish sandstone, which probably rests upon the granite which Mr. Stevens describes as being

seen within about half a mile of the spot. Clay slate is also known in the same neighbourhood, some of the beds being used for roofing.

It is well known, that water charged with copper in solution, is, by the introduction of iron, made to precipitate the metal. The deposit of lignite occurring with the copper, is evidently derived from drifted vegetable matter; and from the mode in which the copper is interspersed throughout the mass, it would appear that the water on which it floated was, at the same time, saturated with a solution of copper, and that both the organic and mineral matter subsided to the bottom together, forming the singular compound now under consideration, and over which, probably, at a subsequent period, the alluvial covering was drifted.

Fossils are numerous in the coal-fields of New Brunswick: many are of great size. "In general," says Mr. Gesner—

"Every vestige of their leaves has disappeared, and nothing remains but the simple impression; but sometimes the leaf is seen in a thin paper-like lamina of coal, and even in the centre of clay-ironstone balls every fibre of the original vegetable texture is beautifully delineated.

"The fossil trees are of different kinds, and occur under a variety of circumstances. At the South Joggins, on the shore of Cumberland Basin, and in the face of a cliff, they are situated at right angles to the planes of stratification, or stand perpendicular to the strata; and as their roots are sometimes found attached, they evidently flourished on the spot. The only relic of the former living tree is the bark, which has been converted into coal, and still bears the original flutings, furrows, and leaf-scars of the plant. The cylindrical trunks have been filled up with sandstone, shale, &c., and now represent the original trees in solid stony columns, from 20 to 60 feet in length, and sometimes upwards of 4 feet in diameter.

In New Brunswick these fossil trees lie prostrate in and between the strata, so far as they have yet been observed. In some instances they have been changed into coal; in others, this change has been partial; and parts of many trunks on the shores of Chignecto Bay are composed of sandstone, iron pyrites, sulphate of barytes, and other minerals. At Bathurst, Carriboo River, and other places, the trees have been mineralised by copper, and their trunks have been worked out of the rocks and disposed of for copper ore, yielding 76 per cent. of pure metal. Large stems are found composed altogether of sandstone, apparently run in a mould like that of the iron-founder. In some of the large stems the ligneous fibre remains perfect and distinct: these are often mineralized by sulphate of barytes, or calcareous spar; they resemble rotten ash, and split lengthwise very readily. There is still another variety of large fossil trees in which the whole of the trunk has been changed into a compact lignite: the original bark now appears in coal, and when removed from the fossil, the tree resembles a peeled oak.

"*Stigmæria* are very numerous; and they are frequently found with their leaves attached and ex-



PRINCE RUPERT.

OB. 1682

FROM THE ORIGINAL OF VAN DYKE IN THE COLLECTION OF

THE RIGHT HON^{BLE} THE EARL OF CRAVEN.

tending in all directions from their trunks into the shales and sandstones. *Lepidodendra*, *calamites*, *sigillaria*, *asterophyllites*, *Pecopteris lonchitica*, and other well-known fossils, are abundant. The fire-clays beneath the coal are most frequently loaded with *stigmaria*, as observed by Mr. W. E. Logan in South Wales, and in the underlays of the coal of Pennsylvania. Among the coal-bearing strata there are sometimes thin layers of limestone containing shells, of which the *modiola* and *cypria* are most common; with them fossil fish have been found: these remains are of fresh water, and occasionally of marine origin. Sulphurous springs are common in the coal-field, and their waters are used by the inhabitants in the cure of cutaneous diseases."

There are 19 limestone quarries in St. John's, and 2 in Carleton. Freestone quarries—2 in Westmoreland; 1 in King's County; 2 in Sunbury; 3 in York; 1 in Carleton; 4 in Northumberland; 3 in Gloucester; 3 in Kent. There are 7 grindstone quarries in Westmoreland, and 2 in Northumberland; a slate quarry in Gloucester; 2 coal mines in Queen's, and 1 in Westmoreland; a manganese mine in Gloucester, and a salt manufactory in King's county.

Soils vary according to the two great classes into which rocks are divided, viz., those formed by the agency of fire, or of water. The disintegration of these rocks as stated in Nova Scotia, afford various soils, differing from each other in their chemical combinations, and adapted to the growth of various vegetable products. There are extensive deposits of alluvial matter scattered by currents over New Brunswick, generally from N. towards the S., often far distant from the place whence they were separated from the mountain rocks. In Westmoreland, Sussex Vale, and the Grand Lake districts, there are red and claret-coloured soils, covering plains that would otherwise have been far less favourable to vegetation. The counties of Charlotte, St. John, and King's, contain tracts of granite, sienite, and trap rocks, which, when decomposed and finely pulverized, yield wheat, oats, potatoes, and Indian corn. The trap rock soil contains much potash, and almost always produces hard wood, such as beech, birch, oak, maple, ash, and butter-nut.

Kent and Sunbury have a rich, mellow covering of earth. Along the coast of the Bay of Fundy the soil produced from grey racker or grauwaack, talcose slate, and limestones, yields groves of cedar, fir, spruce, haematack, and small pines, with laurel bushes and cranberry bogs. The soils derived from limestones, gypsum, conglomerates, red marle sandstone, and shales, are very fertile, and

of various degrees of tenacity. The alluviums forming the best intervalles, are a dark brown mould, from 1 to 20 feet in thickness, and never require manure. They are called "beaver meadows," from having frequently been formed by these industrious animals constructing dams across the rivulets to supply water, where they could be protected from their enemies. From the American frontier across the river St. John, between Woodstock and Madawasca, in a N.E. direction to the Ristigouche and Chaleurs Bay, a superior soil is derived from the extensive groups of calcareous, argillaceous, and silicious rocks. The shores of New Brunswick contain abundance of marine plants and shells, which furnish excellent manure, and some of the soils where slightly subjected to the action of fire when burning off the timber, are thereby improved.

Climate.—New Brunswick, like other portions of the North American continent, partakes of the extremes of heat and cold; the thermometer sometimes rising to 100° F. during the day, and falling in the forest during the night of the same day to 50°. The North Pole, overspread to a vast extent with perpetual ice and snow, sends forth a W. and N.W. wind, which, even in the hottest months of the year, produce a freezing effect. The S. wind is always warm; a S.W. wind produces during the summer, dense fogs along the shores of the Bay of Fundy, which do not extend above 15 or 20 miles into the interior, where they are dispersed by the warm air. A shift of wind during winter or summer, will produce in 24 hours a totally different temperature; and wherever the land is not cleared the melting of the snow is retarded in spring, and the ice appears in autumn sooner than in the open and cultivated country. The climate of the coast, which is humid, differs from that of the interior, which is dry. At St. John's the range of the mercury is from 23° below zero to 88°; at Fredericton from 35° below zero to 95°. The climate of New Brunswick differs but little from that of the state of Maine, Eastern Canada, the north shores of Lake Huron, and part of the Michigan territory. In summer, twilight is seen after nine o'clock in the evening; and daylight begins at two in the morning. The Aurora Borealis is brilliant at all seasons. The following table and the appended remarks indicate the extremes of temperature, the daily average of temperature, the prevailing winds and weather throughout the year:—

*Meteorological Table for Fredericton, N. Brunswick,
Lat. 45° 57', Long. 66° 45'.*

Monthly.	Fahrenheit Thermometer.				Days of Wind.				Days of Weather.			
	Highest.	Lowest.	Daily Average.	Greatest Variation.	E.	S.	W.	N.	Fair.	Rain.	Fog.	Snow.
January	22	12	17	24	4	—	7	6	14	24	2	4
February	29	19	24	34	2	—	4	2	16	23	1	—
March	36	30	33	20	23	2	5	—	1	22	2	—
April	44	36	40	14	12	4	11	—	3	22	7	—
May	49	44	37	10	20	1	7	—	3	18	8	—
June	50	46	48	28	19	1	10	—	16	6	9	—
July	73	58	65	14	20	—	7	2	18	3	10	—
August	75	64	69	12	17	—	9	4	1	23	3	—
September	66	56	61	16	17	—	10	2	1	17	5	—
October	53	42	47	20	14	—	8	—	9	22	7	—
November	34	28	31	16	11	5	—	14	—	15	8	—
December	16	11	13	24	—	—	9	14	8	26	—	3
Mean and Total.	45	37	41	22	159	17	87	44	58	245	62	21

1st. The severest cold of the winter usually continues from the 21st of December to the 21st of March, when the common range of the mercury is at sunrise between 20° and 10°; and at two p.m. between 5° and 30°: though changing towards the middle of March, to 37° and 43° in the heat of the day. It is worthy of observation, that there are, during this season, fifteen days in which the mercury remains below 14°; and only five days in which it does not freeze: a remarkable instance of the severity of an American winter in latitude 46°, which is the parallel of the central parts of France, and the north of Italy.

2nd. From the 21st March to the middle of April, the thermometer ranges at sunrise between 19° and 35°, and at two, p.m. between 35° and 46°. From the middle to the end of April, a great increase in the temperature is evident: although it sometimes freezes slightly in the mornings, yet the mercury frequently reaches to 55° and 64° in the heat of the day.

3rd. During May, the mornings continue cold, (being in five cases below freezing, and only two at temperate,) yet the change in the temperature at mid-day is remarkable, being often 62° and 72°.

4th. June, July, and August are very similar in their temperature. The range in the morning is commonly from 55 to 66, and at mid-day, from 71 to 84. In these three months, and until about the 15th September, the thermometer is, during thirty-eight days, at two p.m. above summer heat, exhibiting a singular contrast to the extreme cold of the winter, such as is scarcely to be found in any other part of the world.

5th. After the middle of September there is a rapid decrease in the heat of the mornings. The thermometer in October at sunrise, on eight or ten days, is below freezing. From the 15th or 20th November to the same time in December, it freezes regularly, though not severely, in the mornings. In the latter month indeed, it mostly remains below freezing.

The prevailing summer winds are from the W.S.W. and South.

The winter season is firmly established at the end of December or beginning of January, but the deepest snows fall in February, or early in March, to the depth of 8 to 12

inches, when boisterous storms sweep the snow with great fury along the face of the open country, leaving some places bare, and raising in others immense drifts or banks. These violent storms seldom last more than one or two days. The vernal equinox generally brings strong gales from the S., accompanied by a thaw. Ice disappears in the bogs, lakes, and rivers, soon after the first of April; ploughing begins at the end of the same month, when summer wheat and oats are sown; in May vegetation rapidly advances, gardening is commenced; potatoes are planted, and barley sown before the end of May. Turnips are sown in the middle of July, when hay-making commences. Barley is reaped in August, wheat and oats in September. Potatoes and turnips are left under ground until the middle or end of October, and parsnips are best if not dug up until spring. Cucumbers, salads, cabbages, cauliflowers, asparagus, and indeed all the culinary vegetables known in England, arrive at perfection; as do also apples, peaches, pears, plums, damsons, currants, gooseberries, strawberries, and raspberries. Grapes when sheltered ripen in the open air. These products indicate that the climate offers no impediment to emigration.

Mr. Hooper, after 13 years' experience in the North American colonies, speaking of New Brunswick, says:—

"The climate is yearly meliorating its rigours; the winters are by no means so severe, or of the same duration, as ten years since, and the reason, to a philosophical mind, is obvious. The rapidity with which settlers are clearing the forest, and opening to the light of heaven the face of the earth, gives to the sun's influence a much greater space of country annually; and, as a natural consequence, the snows melt more early and rapidly, the winters are consequently shorter than formerly. Twenty years since, the winter commenced early in November, and continued generally till the end of April, making nearly a six months' winter; but within the last five or six years there has been no dead winter until Christmas, and the spring has usually opened in the early part of April, making the winter of little more than three months' duration. It cannot, with all the variations of climate, be said with propriety that the full duration of winter is more than four months. Though the cold is intense for nine or ten weeks, the air is dry and elastic, and free from the chilling moisture of a British winter."

The remarks as to amelioration of climate must be considered applicable to the interior, rather than to the sea-coast or adjacent districts; for the following table of the opening and closing by ice of the river St. John for 24 years, does not indicate any favourable change.

Opening and Closing of St. John River at Fredericton.

Years	Opened.	Closed.	Days open.	Remarks.
1825	Apr. 15	Nov. 20	219	
1826	" 17	" 14	211	
1827	" 6	Dec. 3	241	
1828	" 20	Nov. 19	213	
1829	" 17	" 15	212	
1830	" 18	" 29	226	{ Dec. 26, moved and closed again.
1831	" 10	Dec. 1	235	{ Dec. 6, opened and closed; Ap. 10, ice jam.
1832	May 3	Nov. 15	199	{ Nov. 19, moved; 22, closed.
1833	Apr. 10	" 5	219	{ Nov. 19, opened; 29, closed.
1834	" 11	" 17	220	Nov. 16, men crossed.
1835	May 1	" 23	206	
1836	Apr. 28	" 19	205	Ap. 21, moved; 24, jam.
1837	" 17	" 9	206	{ Nov. 24, opened and closed.
1838	May 1	" 25	208	
1839	Apr. 25	" 23	236	{ Nov. 25, moved; Dec. 19, closed.
1840	" 16	" 23	221	
1841	" 27	" 27	214	{ Nov. 27, Steamer Fredericton sailed.
1842	" 24	" 22	212	
1843	" 26	" 14	202	{ Nov. 21, moved; Jan. 21, moved.
1844	" 14	" 27	227	
1845	" 23	Dec. 4	225	
1846	" 6	Nov. 28	236	Mar. 29, moved; ice jam.
1847	" 2	" 20	254	{ Nov. 24, opened; Dec. 15, Steamer arrived; Dec. 16, closed again.
1848	" 19	" 13	208	Steamer St. John sailed.

Note.—The average period during which the river remains open is 218 days: it will, therefore, be shut 147 days, or two-fifths of the whole year. In 1832, the river was open for the shortest, and in 1847, for the longest period of which we have any notice.

But whatever may be the duration of winter, or the heat of summer, the salubrity of the province is unquestionable. In the Journal of the House of Assembly for 1846, there is a return of the pensions allowed by the province to old soldiers and their widows during the year: the number thus pensioned from the revenues of New Brunswick is small; but the longevity of the pensioners is remarkable. The return is dated March, 1846, is made for each county, and gives the name, residence, and age of every pensioner. In Carlton County, 20 pensioners—one of 112 years of age (George Sinnett); one 98; one 92; and the others averaging from 70 to 90. York County, 36—three of 90 and upwards; 11 of 80 and upwards; 12 of 70 and upwards. Charlotte County, 36—one 101 years of age (Susanna Watman); 16 ranging from 80 to 97 years of age; and 12 from 70 upwards. The other counties present similar

instances of longevity, such as would not probably be found in any other country among an equal number of persons of the same class. The salubrity of the climate is thus forcibly attested.

The autumn in New Brunswick, as in other parts of the North American continent, is a season of great beauty and delight. Every tint of colour is observable in the woods, the air is dry and clear; and in November that peculiar change termed the "Indian summer," with its serenity and blandness, its expansive and brilliant aurora at night, and highly charged electrical state of the earth, breaks what would otherwise be a long winter. Shocks of an earthquake were felt in 1663, in 1827, and in 1839. Diseases are few and comparatively simple.

VEGETABLE KINGDOM.—Timber Trees.—The lumber trade is so considerable a source of wealth, that a brief description of the principal forest-trees of British America may be useful. For more detailed accounts, Sir A. B. Lambert's splendid work on American Pines, Mr. Perley's "Report," and the *Canadian Naturalist*, by Mr. Gosse, may be advantageously consulted. The chief American timber for commercial purposes is of the genus *pinus*, which includes the resinous evergreens termed pines and spruces, mostly to be found between the 43rd and 50th parallel of latitude in great perfection, where they generally cover the low grounds and valleys, forming what is termed "soft woodlands." Among the principal of this class are the white pine (*pinus strobus*); the red pine (*pinus rubra*); the black pine (*pinus nigra*); hemlock (*pinus Canadensis*); the spruce (*pinus nigra and alba*); the balsam, or fir (*pinus balsamea*); the tamarack (*pinus pendula*); the cedar (*thuya occidentales*). About ten species of pines exist in Canada, New Brunswick, Nova Scotia, Prince Edward's Island, and Newfoundland. The difference between the pine and the spruce is in the arrangement of their foliage. In the pine, two, three, or five thread-like leaves are united in the same sheath: in the spruce, the shorter leaves are attached singly round the branch, or upon its opposite sides.

The *pinus strobus*, or white or yellow pine, known in England as the Weymouth pine, is a majestic and beautiful tree, of which some specimens have been found on the Columbia river, 250 feet high, and 50 feet in circumference. When growing in open situations it is feathered to the ground, and

risers in the form of a pyramid. In Canada and New Brunswick it is occasionally found 150 feet high, with a diameter of five to six feet, at three feet from its base. In New Brunswick and Nova Scotia the white pine is the first tree to take possession of barren, deserted lands, and the most hardy in resisting the impetuous storms of the ocean. The age these trees attain is not known: 1,500 annular divisions have been counted. The colder the situation the slower the growth, and the harder the timber. For nearly three-fourths of its height the trunk is single, the limbs short, and disposed one above another; the head is formed by a few upright branches. The wood is soft, light, of fine texture, easily wrought, durable, and not liable to split when exposed to the sun. On dry and elevated lands the wood is harder, of a coarse grain, and marked by more distinct concentric circles. When seasoned, it may be thus compared with the larch and spruce, taking for a standard the oak at 100:—

Woods.	Weight of a cubic foot.	Stiffness.	Strength.	Toughness.
	lbs.			
White Pine . . .	28	95	99	92
American Larch .	35 to 41	79	103	134
Black Spruce . .	29	72	86	102

The white pine is equally adapted to furnish masts for the largest ships of war, or to be applied to the most ordinary purposes in our dwellings. If properly seasoned before use, it has no tendency to dry rot; and the unqualified assertion, too frequently made, that all British American pine is bad, and all Baltic timber good, is not supported by facts.

Mr. Perley states, that at "one of the public docks in England, a very extensive granary of four floors, of 9,200 square feet in area, and which contains about 9,000 quarters of grain, has been built entirely of colonial white pine, with the exception of the uprights, which are of red pine. It has now stood 20 years, and is stated to be in every respect perfectly sound and unwarped. It was allowed to remain five years to dry before painting, and up to this time has been painted but thrice. The architect states, that he considers it likely to stand 90 years. An extensive outside fence of white pine was put up in England 23 years since, and is still perfectly sound; it also was allowed to remain five years to dry before painting. All experience,

both in England and America, has shown, that when used for outside purposes, it should be allowed to dry thoroughly before being painted; and that unless sufficient time be given for the vegetable juices to evaporate, white pine will suffer from the dry-rot in the same manner as other timber under like circumstances. An instance is mentioned of a church in Hertfordshire being fitted up with the choicest oak, and instantly painted with several coats before the vegetable principle had exuded. In a very few years, the beautiful work in the chancel was obliged to be taken down, perfectly rotten; and, at this time, the greater part of the pews are in a similar state."

The value of this description of pine for masts of large ships is very great. In Murray's "British America," mention is made of two masts for 74-gun ships in the dockyards at Plymouth, which measured 108 feet in length, and a roller that was everywhere 3 feet in diameter. Such a tree must have been 200 feet long, with a diameter of 5 or 6 feet.

It is essential to the durability of timber that it be cut at the period of the dark moon. There appears to be an ascent and descent of some sap or vegetable life in trees thirteen times in the year, rising and waning with the moon. This has been specially noted with timber growing in tropical countries. The American government are so well aware of the influence of the moon, that the timber supplied for their ships of war is required to be girdled or felled at the dark moon, between the 20th October and 12th February. White pine logs, if stripped of their bark, will remain uninjured thirty years; if not, they are attacked by large worms. Stumps left in the ground resist the influence of heat and moisture many years.

Larix Americana.—A larch—*hacmatack* of the Indians—*tamarack* of the Dutch—termed also *pinus larix*. Leaves deciduous, cones oblong, margin of the scales bent in, bracts fiddle-shaped. Mr. N. Gould, an American merchant of high scientific acquirements, who has travelled extensively in the United States and British America, informs me, that the *hacmatack* grows generally throughout the North-Eastern States of the Union and British America, but is found in the largest quantities in New Brunswick, Nova Scotia, and Prince Edward Island. The timber is straight-grained and fitted for small spare of ships; Mr. Gould.

however, mentions having the mainmast of a vessel of 659 tons made of it—and states that it works roughly—is rather given to warp—is hard, strong, and very durable. In the colonies it is generally used as a building timber, both for houses and small craft; it is particularly approved for knees to fasten the beams of ships, and the butt of the stem, one of the principal roots forming the angle required. Treenails made of it are also considered to be of very superior quality. It is not a timber of commerce, nor is it used to any extent, but for house and ship-building in the colonies. It is sometimes sawn into deals, but never shipped as hachmatak deals, being occasionally called juniper, or red spruce, though more generally confounded with spruce and hemlock, and shipped as inferior goods. Hard working and warping deals, however valuable on the score of strength and durability, are not esteemed in the home market, where softness of grain, freedom of working, and absence of warping, have given a preference to the white or yellow deal of America. The wood burns with a crackling noise, and though not so easily ignited as most of the pine tribe, when once blazing, burns with great briskness, giving out fervent heat; and, therefore, in great request for the fuel of steamboat engines in Canada and the United States. Colonial vessels built of this wood are notoriously durable, inferior to none but teak or British oak; and excepting in one instance, (the *British Merchant*,) there is no record of such vessels having been destroyed by dry rot; whilst in several cases, the oak and other material surrounding, and attached to the hachmatak, has been found destroyed by dry rot, while the larch has remained perfectly free.

Sir A. B. Lambert, in his splendid work on the pines, describes two species of American larch—*larix Americana* and *larix microcarpa*—the latter characterised by smaller cones and more drooping branches. Mr. Perley thinks there is no real foundation for the distinction, and *larix microcarpa* is not now considered a distinct species, but merely a variety of the *larix Americana*, the difference being occasioned by the influences of soil and situation, which so much affect all the resinous trees. Linnaeus states that larch trees live to the age of four hundred years; but, judging from the number of concentric circles in large trees, they would seem to attain even a greater age in New Brunswick.

Michaux the younger says, "The wood of the American larch is superior to any species of pine or spruce, and unites all the properties which distinguish the European species, *being exceedingly strong and singularly durable*." Tredgold says it is extremely durable in all situations, failing only where any other wood would fail. Tiberius caused the Naumachiarian Bridge, constructed by Augustus, and afterwards burnt, to be rebuilt of larch planks brought from Rhætia. Among these was a trunk 120 feet in length, which excited the admiration of all Rome. Wrieking, in his celebrated work on bridges, says that larch is preferable to the pine, the pineaster, or the fir, for constructing the arches of wooden bridges. In some parts of Kamschatka it arrives at a considerable size, and is there used for ships, which last extremely well. Painters, from the time of Pliny to that of Raphael, trusted their works to this wood, which the Roman naturalist styles *immortale lignum*. For ship planks it is much used; and few descriptions of wood, if any, are superior to it for this purpose. It is exported largely to Great Britain for railway sleepers, for which it would seem to be admirably adapted, not only from its strength and durability, but because it bears the driving in of bolts and nails better than any other kind of resinous wood. It is peculiarly adapted for flooring-boards in situations where there is much wear, and for staircases; in the latter, its fine colour when rubbed with oil, renders it greatly preferable to any painted wood, not for reasons of economy alone, but also from its appearance. It is equally well suited on the same account for doors, window shutters, and many other purposes. It makes excellent treenails, little, if at all, inferior to those of the acacia, or locust tree. The wood of the larch tree is said to be much improved in hardness by barking the trees in spring, and felling them late in the autumn. The wood becomes very hard by seasoning, burns with difficulty, and does not readily absorb water. It is stronger and much tougher than oak, but not so stiff; and it has been recommended by Tredgold that, with a view to improve the stiffness of the wood for joists and beams, further experiments should be made of barking trees some time before they are felled. From the form of the tree, barking could be easily accomplished as far as necessary.

The Duke of Athol's celebrated larches

were planted in 1736. In 1831, at 95 years of age, one of the Athol larches is said to have contained 368 feet, or seven loads eighteen feet, which, at the present price of Baltic fir (*pinus Silvestris*, or Scotch fir), would be worth about £43. The duke who planted them was buried in a coffin made from the largest, which measured 106 feet in length. He planted about 8,000 acres with this tree, in the neighbourhood of Dunkeld and Blair Athol.

In Switzerland the larch abounds, and the dwellings of the peasantry attest its durability as a building timber. The Romans when first acquainted with the larch, during their German wars, lost no time in bringing it down from the Alps by the river Po, thence to be conveyed to Rome for building purposes. Vitruvius bears evidence of its value, as building timber. Pliny says, "This tree is the best of the kind that bears rosin; it rots not, but endures a long time." And this assertion of Pliny's is well borne out by what is stated as a fact—that the immense floating palace or ship, built by the emperor Trajan, as a summer residence on Lake Nerni, of cypress and larch, having been weighed up, the timber was found sound after 1,400 years' immersion. It is worthy of remark, that this vessel appeared to have been sheathed with lead, fastened with copper nails, double planked, and caulked with linen rags, payed over with Greek pitch (*asphaltum*). In Russia, whilst the exportation of oak is permitted, the larch is a government monopoly, for the national purpose of ship building, and its exportation prohibited. Of the applicability of larch to purposes of ship building, and of its durability, we find the following notices:—"In the year 1809, larch timber, grown by his grace the Duke of Athol, was first used for the British navy in building, at Woolwich dock-yard, the Serapis store-ship; the Sybille frigate; the bottom of a lighter; and for piles driven into the mud alternately, wet and dry; and in all the various situations, proved a strong and durable timber." The Athol, of twenty-eight guns, was also built entirely of larch of the same growth; and, at the same time, the Niemen, of Riga timber. After their first courses of service they were both examined, when the Niemen was found in a decayed state, and condemned accordingly, whilst the Athol was again put into commission, and after a second course of service again examined, and again found sound; and she has ever, from that to the

present day, endured the incessant wear and tear of a store-ship, in every climate for 30 years. It was also observed, that during the period that this timber lay in Woolwich dock-yard, exposed to the weather, neither the heart nor the sap-wood exhibited decomposition, nor did lichen or fungus grow thereon.

Pinus Nigra.—The black spruce, sometimes called red spruce, most abundant between the parallels of 44° and 53°, constitutes a thin part of the forests of New Brunswick, and of Prince Edward Island, grows 70 to 80 feet high, with a diameter of 18 to 24 inches, regularly diminishing from base to summit. Leaves four-sided, scattered on all sides of the branches, erect, straight, cones ovate, scales oval, with undulated margins, close-toothed at the apex, trunk smooth, (that of the pines is rough) branches horizontal, not declining like those of the true Norway spruce; distinguishing properties, strength, lightness, and elasticity. It furnishes fine yards and topmasts, and is frequently used for the knees of vessels, which are formed of the base of the trunk and one of the principal roots, and are said to possess great strength and much durability. By many, the wood of the black spruce is preferred to that of the white pine; for flooring, it furnishes the spruce deals of commerce, which now constitute one of the largest and most valuable exports of New Brunswick. These deals are of the uniform thickness of 3 inches, not less than 12 feet in length, and 9 inches in breadth. The most usual dimensions are 9 and 11 inches in width, and lengths of 12, 14, 16, 18, and 21 feet. Spruce battens are 12 feet long, 7 inches in width, and 2½ inches in thickness. The manufacture of spruce deals commenced in New Brunswick about the year 1819, and has since been increasing. The erection of steam saw-mills within a few years, has greatly increased this branch of business, and enhanced the value of spruce logs.

From the young branches of the black spruce is made the salutary drink known by the name of "spruce beer," which in long voyages is found an efficacious preventative of scurvy. The twigs are boiled in water, a certain quantity of molasses or maple sugar is added, with a little yeast, and the mixture is left to ferment. The essence of spruce is obtained by evaporating to the consistence of an extract, the water in which the summits of the young branches have been boiled.

The leaves and buds of the black spruce

are not known to be eaten by any living thing except the "spruce partridge," which picks the buds in the spring of the year, whence it derives its name, and its bitter flavour.

Abies Alba, the white spruce, is found in the same countries as the preceding, but not quite so far north. From the unpleasant smell of the foliage, it is sometimes called "cat" spruce.

The leaves of both encompass the branches, but those of the white spruce are less numerous, longer, more pointed, at a more open angle with the branches, and of a pale bluish-green; the cones are also peculiar, being of a lengthened and oval form, above 2 inches in one direction, and 6 or 8 lines in the other; the dimensions vary according to the vigour of the tree, but the form is unchangeable. Scales loose and thin, with entire edges unlike those of the black spruce; the seeds are rather smaller, and ripen a month earlier; trunk more tapering than the black spruce, inferior in stature, rarely exceeding 50 feet in height, and 16 inches in diameter at three feet from the ground; bark lighter coloured. Wood used for the same purposes as the black spruce, but inferior in quality. Fibres of roots used by the Indians for stitching their bark canoes. Branches not used for beer on account of their unpleasant odour.

Both the black and the white spruce are easily propagated by their seeds, or by transplanting into proper soils; they afford one of the most dense and compact screens, or shelters from the wind, that can be made by trees. They are cleanly, comparatively of slow growth, durable, and live to a great age. They abound in thick masses, of stunted growth, on the rocky shores and inlets of the Bay of Fundy. Their fine dark green, conical tops, contrast strongly with the snow during the cold season, and they form one of the most striking characteristics of a winter scene on the seaboard, living and thriving as they do, where other trees could scarcely obtain foothold, and seeming to bid defiance both to the ocean and the storm, even during a combination of their utmost strength. The white spruce was the most northerly tree seen by Dr. Richardson on the Coppermine River, within 20 miles of the Arctic Ocean; it attains a height of 20 feet.

Pinus Rubra.—The red pine, called by the Hudson's Bay people the Juniper, extends from beyond Lake Superior, to the 42nd parallel; it is chiefly found mingled with the

white pine, or in small tracts by itself. Dr Richardson found it in swampy situations, from York Factory to Point Lake, in 65° N., but very dwarfish, seldom exceeding 6 or 8 feet in length. The leaves are of dark green, in pairs, 5 or 6 inches long, and collected in bunches at the extremity of the branches; flowers bluish the first month of their appearance; cones ovate, conic, rounded at the base, about half as long as the leaves, without thorns, scales dilated in the middle, shed their seeds the first year; height of trees, 70 or 80 feet; diameter, 2 feet and upwards; trunk uniform in size for two-thirds of its length. Wood, a fine compact grain, heavy from the resinous matter with which it is impregnated; highly esteemed for strength and durability in ship-building. Deck planks have been procured 40 feet in length without a knot. The Canadian red pine differs from the Norway pine, with which it is sometimes confounded; the Norway pine is a species of spruce.

Abies Canadensis.—Hemlock spruce is found as far N. as 51°, and is natural to the coldest regions of North America; leaves, 6 or 8 lines long, flat, numerous, and irregularly disposed in two ranks, and downy at their unfolding. Height, 70 to 80 feet; diameter, 2 to 3 feet; uniform for two-thirds of its length; and if the concentric circles in the wood are to be considered as an indication of age, it requires two centuries to reach full growth. It is used for sleepers of railways, for wharfs, or mines, where it is constantly wet; and for lath-wood. The bark is extensively used in tanning.

Abies Balsamifera—*Pinus Balsamea*.—A beautiful evergreen tree, in open situations feathered to the ground, and rising in a pyramidal shape to the height of 30 feet or more; and on these accounts, much planted for shrubbery and park scenery in Great Britain. The body tapers from a foot in diameter at the surface of the ground, to 7 or 8 inches at the height of 6 feet. When standing alone, and developing itself naturally, its branches, which are numerous and thickly garnished with leaves, diminish in length in proportion to their height, and form a pyramid of perfect regularity. The leaves are 6 or 8 lines long, and are inserted singly on the sides, and on the top of the branches; they are narrow, rigid, and flat, of a bright green above, and a silvery white beneath, whence the name of the tree is probably derived. The cones are nearly cylindrical, 4 or 5 inches long, and an inch in diameter, and always directed

upwards; this characteristic also belongs to the silver fir of Europe, and distinguishes these species from others of the fir tribe, whose cones are turned towards the earth. The famous *Canada Balsam* is procured from this tree; it is found in small blisters or vesicles in the bark, extracted by incision, and received in a limpid state, as a greenish transparent fluid, acrid, into a shell or cup. The Indians use it for fresh wounds, and also take it internally. Perhaps there is not a better varnish for water-colour paintings, than that which is prepared from this liquid resin. The branches of this, as well as the hemlock, are used by the Indians, and Canadian voyagers, to sleep upon. In their winter voyages, they scrape the snow into heaps with their snow-shoes, making a kind of snow wall on each side of their lair, then strewing the ground with young branches, properly laid down, wrap themselves in their blankets; and thus sleep, when the thermometer is many degrees below zero.

Pinus Banksiana or *Ruprestes*.—The gray chipû, or scrub pine, is found farther N. than any other pine. Michaux says, "in the environs of Hudson's Bay, and the great Mistassin lakes, the trees which compose the forests a few degrees farther S., disappear almost entirely, in consequence of the severity of the winter, and the sterility of the soil. The face of the country is almost everywhere broken by innumerable lakes, and covered with large rocks, piled upon each other, and usually overgrown with large black lichens, which deepen the gloomy aspect of these desolate and almost uninhabited regions. Here and there, in the intervals of the rocks, are seen a few individuals of this species of pine, which fructify, and even exhibit the appearances of decrepitude, at the height of three feet. One hundred and fifty miles further S., its vegetation is more vigorous, but it is still not more than eight or ten feet high: and in Nova Scotia, where it is confined to the summit of the rocks, it does not exceed this stature." The leaves are united in pairs in the same sheath, but disseminated over the branches, instead of being collected in bunches at the extremity; about an inch long, flat on the interior, and rounded on the exterior face. The cones commonly in pairs, of a gray or ashy colour, about two inches long, always point in the same direction as the branches; naturally assume an arching shape, which gives them the appearance of horns; are extremely

hard, and do not open to release the seeds until the second or third year.

A pine of gigantic size has been discovered by Mr. D. Douglas, W. of the Rocky Mountains; one specimen (not the largest blown down,) was measured by him, and found to be 215 feet in length; circumference, 8 feet from the ground, 57 feet 9 inches; and 134 feet from the ground, 17 feet 5 inches. Cones, 12 to 16 inches in length, and 11 in circumference. They are two years acquiring their full growth; when the trunk is partly burned, the resin which exudes is sweet and used as sugar. The seeds are roasted for food, and made into cakes. This magnificent pine is termed *Sambertiana*.

Thuya Occidentalis.—White cedar, a handsome and useful tree, which grows chiefly in marshes to the height of 40 or 50 feet, and 2 feet in diameter; leaves evergreen, small and curiously imbricated or lopped over each other; branches slender and usually pendant, bark fibrous and stringy; flowers scarcely visible; cones very small, rugged, of a greenish, and subsequently, bluish tint. Michaux states that he counted 277 annual layers in a trunk 21 inches in diameter, at 5 feet from the ground; and 47 in a plant only 8 inches thick at the surface, which proved it to be then 50 years old. Wood—white, light, soft, fine-grained, and easily wrought. When sufficiently seasoned, and exposed some time to the light, it is of a rosy hue; and has a strong aromatic odour, which it preserves as long as it is guarded from humidity. The perfect wood resists the succession of dryness and moisture for a great length of time, and this constitutes its great value for fencing. Rails of split cedar have been known to last from 50 to 60 years *when deprived of the bark*. Shingles of white cedar have been known to last upwards of 30 years; when sawed into very thin boards, used for the construction of light boats, especially for those used in the whale fishery.

Mr. Perley says, that the superior fitness of this wood for various household utensils, has given rise in the United States to a distinct class of mechanics, called "cedar coopers," who principally fabricate large and small tubs, pails, churns, and other household utensils, as well for export as for home consumption. This ware, instead of becoming dull, like that of other wood, becomes whiter and smoother by use. It is esteemed the best wood in which to preserve oils. Charcoal, highly esteemed in the manufacture of

gunpowder, is made of young stocks about an inch and-a-half in diameter, deprived of their bark. The seasoned wood affords a beautiful lamp-black, lighter and more intensely coloured, though less abundant than that obtained from the pine.

Arbor Vitæ—American—A species of thuya, abounding in favourable situations, such as sedgy swamps and borders of lakes, between the parallels of 45° and 48°. Two varieties, the "striped-leaved" and the "sweet-scented:" height, 40 feet; diameter, about 2 feet; growth, extremely slow. The valuable properties of the wood are well known.

The cedar generally escapes the ravages of the *bostrichus piniperda*, the most destructive of the insects which commit great ravages on the fir tribe. "This little animal," says Mr. Perley, "introduces itself into the cellular integument of the bark, and succeeds in dividing it from the trunk. The separation of the bark prevents the circulation of the sap, and hence results the inevitable death of the tree. In dense groves of trees of the fir tribe, where only a few are felled, these insects multiply rapidly on the tops and branches which are left after the removal of the trunk, and they thence extend to the standing timber, attacking generally the oldest trees, and those which have any defective art. Young and thrifty trees resist their attacks."

The leafy trees of British America are composed chiefly, of the *quercus*, two species—gray and red oak; of *juglans*, one—the walnut, or butternut; of *acer*, five—the white, red flowering, sugar or rock, moose wood, and low maple; of *cornus*, one—the dogwood; of the *betula*, four—the canoe, white, yellow, and black birch; of *alnus*, two—common and black alder; of *cerasces*, two—the wild and the northern cherry; of *populus*, two—the balsam poplar (balm of Gilead), and the American aspen; of *fagus*, two—white and red beech; *carpinus*, two—American horn-beam and iron wood; of *fraxinus*, two—white and black ash; of *salix*, three—the black, champlain, and shining willow; *ulmus*, two—the white and red elm; and of the *zilia* one—the American lime, or bass wood.

I am indebted for the following interesting description of these several trees to H. M. Perley, Esq. :—

Gray Oak—*Quercus Borealis*, seldom, if ever, exceeds 40 feet in height, or 2 feet in diameter. It

blooms annually. A cubic foot of the gray oak from the Grand Lake, in Queen's County, New Brunswick, weighed 52 pounds when well seasoned.

Red Oak—*Quercus Rubra*, a tall, wide-spreading tree, of larger size than the gray oak. Leaves are smooth and shining on both sides; in the autumn they change to a dull red, and turn yellow before they fall. The acorns are large and abundant, rounded at the summit, compressed at the base, and contained in flat cups, covered with narrow compact scales. They are voraciously devoured by wild animals, and by cows, horses, and swine, when ranging the woods after the herbage has perished. Wood reddish and coarse-grained, and the pores are often large enough for the passage of a hair. Tolerably strong, but not very durable, and it is chiefly used for the staves of barrels and casks, in which to contain dry wares. A cubic foot of this wood, well seasoned, weighed 44 pounds. A cubic foot of English oak, when seasoned, weighs from 50 to 54 pounds.

Butternut.—*Juglans Cathartica*, frequently attaining the height of 80 feet, and the diameter, at 4 feet from the ground, of 6 to 8 feet. The roots of a large-sized tree, often extend even with the surface of the ground, in a serpentine direction, and with little variation in size, to the distance of 40 feet. The trunk ramifies at a small height, and the branches, seeking a direction more horizontal than those of other trees, and spreading widely, form a large and tufted head, which gives the tree a remarkable appearance. The fruit is commonly single, and suspended by a thin, pliable foot-stalk, about three inches in length; its form is oblong oval, without any appearance of seam. It is often two and-a-half inches in length, and five inches in circumference, and is covered with a viscid adhesive substance, composed of small transparent vesicles, which are easily discovered with the aid of a glass. The nuts are hard, oblong, rounded at the base, and terminated at the summit in an acute point; their surface is very rough, deeply and irregularly furrowed. They are ripe in New Brunswick in October, and in some seasons are so abundant, that one person may gather several bushels of them in a day. The Indians, in former times, pounded and boiled the kernels, and separating the oily substance which swam upon the surface, mixed it with their food. These kernels are very oily, and hence the name of 'butternut.'

"When the fruit has attained about half its growth, it is sometimes used for making pickles, being first plunged into boiling water, then thoroughly wiped to clean it of its down, and afterwards preserved in vinegar. If the trunk of the butternut is pierced in the month which precedes the unfolding of the leaves, a pretty copious discharge ensues of a slightly sugary sap, from which, by evaporation, a sugar is obtained of a quality but slightly inferior to that of maple sugar. An extract of butternut bark in water, or even a decoction sweetened with honey, is acknowledged to be a very excellent cathartic. Its purgative operation is stated to be always sure, and unattended, in the most delicate constitutions, with pain or irritation. On a live tree, the inner bark, when first exposed, is of a pure white; in a moment it changes to a beautiful lemon colour, and soon after to a deep brown. The bark of the butternut tree is very commonly used in the country for dying yellow, and many fine trees are annually destroyed by the recklessness of the back-woodsmen, who strip the bark from the trunk for this purpose.

"The butternut wood is light, of little strength, and of a reddish hue, but possesses the great advantage of lasting long, and of being secure from the ravages of worms; and it will long resist the effects of heat and moisture. On the Ohio, it is sawn into boards for the construction of small skiffs, which, on account of their lightness, are in request for river navigation. It is also used for the panels of coaches and carriages, for which it is found well adapted, not only from its lightness, but because it is not liable to split, and receives paint in a superior manner. For corn shovels and wooden dishes, it is preferred to the red flowering maple, because it is lighter and less liable to split. Very considerable quantities of furniture are now made at Frederickton of butternut wood, which is becoming in great request for a variety of purposes. For wainscoting, and for fitting up libraries, it is well adapted, being easily worked, of a pleasing colour, and susceptible of a good polish, which throws out the graining, and shows the wood to advantage.

"*The Maples*, in general, are lofty and beautiful trees, deciduous, and sufficiently hardy; they grow quick, are easily transplanted, and bear cropping. The grass flourishes under their shade. They prefer a free, deep, and loamy soil; rich, rather than sterile, and neither wet nor very dry. The situation that suits them best is one that is sheltered and shady, rather than exposed. They are seldom found on the north side of lofty mountains, or on mountains at all, except among other trees; but on the plains they are found by themselves. The wood of the maples differs so widely in quality in different species, that it is difficult to characterise it by general observations. Maple wood speedily ferments and decays when exposed to the weather. It is liable to be injured by worms, and hence is unfit for building. It possesses, however, other qualities which in part compensate for these defects, and which render it useful in the arts, and in domestic economy.

"*White Maple—Acer Eriocarpum.* Trunk low, and divides itself into a great number of limbs, so divergent that they form a very spacious head. The leaves are opposite, and supported by long footstalks; they are divided by deep sinuses, into four lobes, and are toothed on the edges, of a bright green on the upper surface, and of a beautiful white beneath. The foliage is scattered, and leaves an open thoroughfare to the sunbeams. Wood, very white, and of a fine grain; but it is softer and lighter than that of any other species of the maple, and, from its want of strength and durability, is but little used. When dry, it weighs 38 pounds to a cubic foot, and in seasoning loses nearly half its weight. As it soon changes colour, it is not much used for cabinet work. The charcoal made from it is esteemed for yielding a strong uniform heat of long continuance. The sap of the white maple is in motion earlier in the spring than in the sugar maple. Like the red maple, it yields but half the product of the sugar maple from a given measure of sap, but the unrefined sugar is said to be whiter and more agreeable to the taste than that of the sugar maple. The inner bark of the white maple rapidly produces a black precipitate, with sulphate of iron.

"*Red-flowering Maple—Acer Rubrum.*—Whether in flower or in foliage, the red maple, like its congeners, is a beautiful tree. It neither attains the size nor the height of the sugar maple. The blossoms, which are of a beautiful purple, or deep red, unfold more than a fortnight before the leaves. The

fruit is of the same hue with the flowers, though it varies in size and in the intensity of its colouring according to the exposure and the dampness of the soil. The extremities of this tree, which are formed by numerous twigs united at the base, have a remarkable appearance when garnished with flowers and seeds of a deep red, before vegetation has begun generally to revive.

"The wood, when dry, weighs forty-four pounds the cubic foot; when green, it is soft, full of aqueous matter, and loses in drying nearly one-half of its weight. It is harder than the wood of the white maple, and of a finer and closer grain; hence it is easily wrought in the lathe, and acquires by polishing a glossy and silken surface. In the United States the wood is principally employed for the lower part of Windsor chairs. It is also used for spinning-wheels and saddle-trees, and in the country is preferred for yokes, shovels, and wooden dishes.

"It sometimes happens in very old trees that the grain, instead of following a perpendicular direction, is undulated; and this variety bears the name of 'curled maple.' This singular arrangement, for which no cause has ever been assigned, is never witnessed in young trees, nor in the branches of such as exhibit it in the trunk. It is also less conspicuous at the centre than near the circumference. Trees offering this disposition are rare, and do not exist in the proportion of one to a hundred. The serpentine direction of the fibre, which renders it difficult to split and to work, produces, in the hands of a skilful mechanic, the most beautiful effects of light and shade. These effects are rendered more striking, if, after smoothing the surface of the wood with a double-ironed plane, it is rubbed with a little sulphuric acid, and afterwards anointed with linseed oil. On examining it attentively, the varying shades are found to be owing entirely to the inflection of the rays of light, which is more sensibly perceived on viewing it, in different directions, by candle-light.

"Before mahogany came into such general use, the wood of the red-flowering maple was much used for furniture; bedsteads are still made of it, which in richness and lustre excel the finest mahogany. It is now sawn into thin plates (veneers) which are used to inlay other woods, in articles of cabinet work, and the finishing of ships' cabins. The red-flowering maple never produces the variety known as 'bird's-eye maple;' that is confined exclusively to the sugar or rock maple. The inner bark of the red-flowering maple is of a dusky red. By boiling, it yields a purplish colour, which, on the addition of sulphate of iron, becomes a dark blue, approaching to black. It is used in the country, with a certain portion of alum in solution, for dyeing black. The wood of this maple is inferior to that of rock maple for fuel. The French Canadians call this tree *plaine*: They make sugar from its sap, but, as in white maple, the product of a given measure is only half as great as is obtained from the rock or sugar maple.

"*Sugar Maple—Acer Saccharinum.*—This is the most interesting of the American maples, and is called rock maple, hard maple, and sugar maple. The first of these is most generally used; but Michaux used the last, as indicating one of the most valuable properties of the tree. The sugar maple frequently reaches the height of 70 or 80 feet, with a proportional diameter; but it does not commonly exceed 50 or 60 feet, with a diameter from 12 to 18 inches. Well-grown, thriving trees are beautiful in their appearance, and easily distinguished by the whiteness

of their bark. The natural *habitat* of the sugar maple is the steep and shady banks of rivers, and elevated situations, where the soil is cold and humid, free, deep, and fertile, and not surcharged with moisture.

"The leaves are about five inches broad, but they vary in length according to the age and vigour of the tree. They are opposite, attached by long footstalks, palmated, and equally divided into five lobes, entire at the edges, of a bright green above, and glaucous, or whitish underneath. In autumn, after the appearance of the first frost, their colour changes from green to all shades of red, from the deepest crimson to light orange. At first the leaves at the extremities of the branches alone change their colour, leaving the internal and more shaded parts still in their verdure, which gives to the tree the effect of great depth of shade, and displays advantageously the light, lively colouring of the sprays. Later in the season, when the tints become more and more gorgeous, and the full beams of the sunshine fall upon the large masses of foliage, the warm and glowing colours of the whole summit possess a great deal of grandeur, and add much to the beauty and effect of the landscape.

"Mr. McGregor, in his work on British America, speaking of the forests, says,—It is impossible to exaggerate the beauty of these forests; nothing under Heaven can be compared to its effulgent grandeur. Two or three frosty nights in the decline of autumn, transform the boundless verdure of a whole empire into every possible tint of brilliant scarlet, rich violet, every shade of blue and brown, vivid crimson, and glittering yellow. The stern, inexorable fir tribes, alone maintain their eternal sombre green; all others, on mountains or in valleys, burst into the most glorious vegetable beauty, and exhibit the most splendid and most enchanting panorama on earth."

"The wood of the sugar maple when first cut is white, but after being wrought, and exposed for some time to the light, it takes a rosy tinge. Its grain is fine and close, and when polished it has a silky lustre. It is very strong, and sufficiently heavy, but wants the property of durability; when exposed to moisture it soon decays, and is therefore neglected in civil and naval architecture. For many purposes, however, it is preferred to beech, birch, or elm; but it should be perfectly seasoned, which requires two or three years.

"The wood of the sugar maple grown in New Brunswick, when dry, weighs forty-six pounds to a cubic foot; that grown to the southward of New Brunswick weighs much less. It furnishes the best fuel in the province, and its ashes are rich in the alkaline principle. Four-fifths of the pot-ashes exported from Boston and New York to Europe, are made from this maple. The charcoal made from it is preferred to any other; it is one-fifth heavier than the coal made from the same species of wood in the middle and southern states, a fact which sufficiently evinces that the sugar maple acquires its characteristic properties in perfection only in a northern climate.

"There is a great resemblance in appearance between the wood of the red-flowering maple and that of the sugar maple; but the latter is easily distinguished by its weight and hardness. There is, besides, a very certain and simple test. A few drops of sulphate of iron (copperas) being poured on samples of the different species, the sugar maple turns greenish, and the white maple and red-flowering maple change to a deep blue.

"The sugar maple exhibits two accidental forms in the

arrangement of the fibre, of which cabinet-makers take advantage for making beautiful articles of furniture. The first consists in undulations, like those of the red-flowering maple, and is likewise known as "curled maple;" the second, which takes place only in old trees that are still sound, appears to rise from an inflexion of the fibre from the circumference toward the centre, producing spots of half a line in diameter, sometimes contiguous, and sometimes several lines apart. The more numerous the spots the more beautiful, and the more esteemed is the wood; this variety is called 'bird's-eye maple.' It is now beginning to be exported in very considerable quantities to the United Kingdom, where it brings a high price; and as its value is becoming more generally understood, it is to be hoped that hereafter it will not be so lavishly cut and wasted by the lumberers and back-woodsmen as has heretofore been the case.

"The ancients held the maple in great esteem; and tables inlaid with curious portions of it, or formed entirely of its finely-variegated wood, in some instances brought their weight in gold. To such a height did the fondness of the Romans for curious woods carry them at one period of their history, that their tables were even more expensive than the jewels of their ladies. Maple dishes are frequently mentioned by the Latin poets; and Cowper and many modern poets also mention bowls of maple as being used by shepherds and hermits. Virgil celebrates the maple as the throne of the 'good Evander,' and its branches as the canopy under which he received and seated Æneas:

"On sods of turf he sat the soldiers round;
A maple throne, raised higher from the ground,
Received the Trojan chief; and o'er the bed
A lion's shaggy hide for ornament they spread."

"Pliny gives an elaborate account of the uses and properties of maples; he enumerates ten different kinds which were known in his time.

"Besides the varieties of 'curled maple' and 'bird's-eye maple,' two other varieties occur in the wens or excrescences which grow on the trunk of the sugar maple. The most valuable of these is known by the name of 'variegated maple knob,' or '*loupe d'érable de couleurs variées*, of the French. It presents an assemblage of shades agreeably disposed, sometimes resembling Arabic characters, which renders the wood exceedingly appropriate for fancy work, and, from its scarcity, it commands very high prices. The other variety, known by the name of 'silver white maple knob,' or '*loup d'érable blanc argente*,' of the French, exhibits a silvery lustre, and is highly prized for the same purposes as the preceding, although more common.

"The Indians of New Brunswick have been accustomed to make their dishes of these maple knobs from time immemorial, and they still continue to use them, for with ordinary care they last a very long time. Some of these rude dishes, when finished and polished by an experienced workman, are exquisitely beautiful, and worthy a place among the most rare and costly specimens of wood.

The extraction of sugar from the maple is a valuable resource in a country where all classes of society daily make use of tea and coffee. A cold and dry winter renders the trees more productive than a changeable and humid season. When frosty nights are followed by dry and warm days, the sap flows abundantly; and from three to five gallons are then yielded by a single tree in twenty-four hours. Three persons are found sufficient to attend 250 trees; each

tree of ordinary size yields, in a good season, twenty to thirty gallons of sap, from which five or six pounds of sugar are made; but the average quantity, in ordinary seasons, is about four pounds to each tree. Wild and domestic animals are immoderately fond of maple sap, and break into enclosures to sate themselves with it.

"*Moose Wood—Acer Striatum.*—The name of moose wood was given it by the first settlers, from observing that the moose subsisted, during the latter part of the winter and beginning of spring, upon its young twigs. Its ordinary height is ten feet, though individual trees are found more than twenty feet. The trunk and branches of the moose wood are clad in a smooth green bark, longitudinally marked with black stripes, by which it is easily distinguishable at all seasons of the year. The small size of the moose wood forbids its use in any kind of construction; but as it is white and fine grained, cabinet-makers sometimes employ it in forming the white lines with which they inlay mahogany. Its principal advantage to the inhabitants consists in furnishing them, at the close of winter, when their forage is exhausted, with a resource for sustaining their cattle, till the advancing season has renewed the herbage. As soon as the buds begin to swell, the famished horses and neat cattle are turned loose into the woods, to browse on the young shoots, which they consume with avidity. Poor as this resource may appear, it is not wholly inadequate, as the twigs are tender, and full of saccharine juice.

"*Mountain Maple—Acer Montanum*, seldom exceeds 15 feet in height, but it blooms at an elevation of 6 or 8 feet, and even less.

"*Flowery Dog Wood—Cornus Florida*, forms a tree, attaining a height of 30 to 35 feet, with a trunk of 9 or 10 inches in diameter; but in general it does not exceed one-half of these dimensions. The trunk is strong, and is covered with a blackish bark, chopped into small portions, which are often in the shape of squares, more or less exact. The branches are proportionally less numerous than on other trees, and regularly disposed nearly in the form of crosses. The leaves are oval, of a dark green above, and whitish beneath. Towards the close of summer they are often marked with black spots, and at the approach of winter they change to a blood red. The flowers, which appear in May, or early in June, while the leaves are only beginning to unfold themselves, are yellowish, and collected in bunches, which are surrounded with a very large involucre, composed of four large white floral leaves, sometimes inclining to violet. This fine involucre constitutes the chief beauty of the flowers, which are very numerous, and which, in their season, robe the tree in white, like a full-blown apple tree, and render it one of the fairest ornaments of the American forests.

"The berries, which are of a vivid glossy red, and of an oval shape, are always united. They remain upon the tree until the first autumnal frosts, when, notwithstanding their bitterness, they are devoured by the robin (*Turdus migratorius*) and other small birds.

"The wood is hard, compact, heavy, and fine-grained; it is susceptible of a brilliant polish. The sap-wood is perfectly white, and the heart-wood is of a chocolate colour. This tree is not large enough for works which require pieces of considerable size; it is used for the handles of light tools, such as mallets, chisels, and the like. In the United States some farmers select this wood for harrow teeth, for

the hames of horses' collars, and also for shoeing sled-runners; it is also used for the cogs of mill-wheels; but to whatever purpose it is applied, being liable to split, it should never be wrought until it is perfectly seasoned. The shoots, when three or four years old, are found suitable for the light hoops of small casks; and the divergent branches are used for the yokes which are put on the necks of swine, to prevent their breaking into enclosed fields. The arrows of the Indians were formerly made of dog wood, as were also the spears of the ancients, by whom this wood was held in high esteem. Virgil speaks of it—

"bona bello
Cornus."

"The berries dye purple; the inner bark, which is extremely bitter, has proved an excellent substitute for the Peruvian bark. Dr. Walker, of Virginia, in an inaugural dissertation on the comparative virtues of the *Cornus florida*, *C. sericea*, and *Cinchona officinalis* of Linnæus, after detailing a great number of experiments, remarks:—'A summary recapitulation of these experiments shows, that the *Cornus florida*, *sericea*, and Peruvian bark, possess the same ingredients, that is, gum, mucilage, and extracts, which last contain the tannin and gallic acid, though in different proportions. The *florida* has most of the gum, mucilage, and extracts; the *sericea*, the next, which appears to be an intermediate between the *florida* and *cinchona*; while the latter possesses most of the resin. Their virtues appear similar and equal in their residence. The extract and resin possess all their active powers. The extract appears to possess all their tonic powers. The resin, when perfectly separated from the extract, appears to be purely stimulant; and probably the tonic powers of the extract are increased when combined with a portion of the resin, as in the spirituous tincture.' The bark also may be substituted for galls in the manufacture of ink. From the bark of the more fibrous roots, the Indians obtain a good scarlet dye.

"Such are the profitable uses of this tree, which merits attention from the value of its wood, its useful properties, and especially from the beauty and brilliancy of its flowers, by which it is better adapted than almost any other of the North American trees, for the embellishment of extensive gardens and pleasure-grounds. In England it is cultivated solely as an ornamental shrub; but from its large white flowers, 'emulous of the purity of snow,' which finely contrast with the 'forest green,' it is said to deserve richly a place in every collection where it will thrive.

"*Canoe Birch—Betula Papyracea.*—By the French Canadians, this tree is called *Bouleau blanc*, white birch, and *Bouleau a canot*, canoe birch. It is known in New Brunswick, also by these denominations, and sometimes by that of 'paper birch,' but that of 'canoe birch' has been deemed most proper, as indicating an important use made of the bark.

"To the inhabitants of these regions, the trees of this genus are highly interesting, and are applied by them, with wonderful ingenuity, to the necessities of life. They employ the wood in the construction of houses and of vessels, and in the works of the wheelwright and the cabinet-maker; of the bark, which is nearly incorruptible, they make boxes, canoes, and more secure covering for their habitations; with the leaves they dye their nets; and from the sap they procure a mild and sugary beverage.

"The canoe birch is most multiplied in the forests of North America, in that portion lying N. of the

43rd degree of latitude, and between longitude 75° W., and the Atlantic Ocean; this portion, though situated 10° further S., is said very nearly to resemble Sweden and the eastern part of Prussia, not only in the face of the country, but in the severity of the climate. Below the 43rd degree of N. latitude, the canoe birch is not found. It attains its largest size, which is about 70 feet in height, and 30 inches in diameter, on the declivity of hills and in the bottom of fertile valleys. Its branches are slender, flexible, and covered with a shining brown bark, dotted with white. The twigs are erect in young trees, but being very slender and pliant, are apt to become pendent in old ones; hence a very beautiful variety, nearly equal in gracefulness to the drooping elm.

"The heart, or perfect wood, when first laid open, is of a reddish hue, and the sapwood is perfectly white. It has a fine glossy grain, with a considerable share of strength; that it is little employed, is owing partly to its speedy decay when exposed to the succession of dryness and moisture, and partly to the existence in its vicinity of several species of wood, such as the maples, the beech, and even the yellow birch, which are far preferable for the uses of the joiner and the wheelwright.

"A section of the trunk of this tree, 1 or 2 feet in length, immediately below the first ramification, exhibits very elegant undulations of the fibre, representing bunches of feathers, or sheaves of corn. These pieces, divided into thin veneers, were formerly much used by cabinet-makers in the United States to embellish their work. The canoe birch affords tolerably good fuel, but is inferior to maple. On trees not exceeding 8 inches in diameter, the bark is of a brilliant white, like that of the white birch of Sweden, and like that, too, it is almost indestructible. Trees long since prostrated by time, are often met with in the forests, whose trunks appear sound, while the bark, which remains perfect, contains only a friable substance like vegetable mould. This bark, like that of the European species, is devoted to many uses. In New Brunswick, large pieces are placed beneath the shingles and clapboards to render the houses dryer and less penetrable to cold.

"The Indians make boxes, dishes, and a variety of ornamental articles, of birch bark; the boxes they ornament very neatly with stained porcupine quills; the ornamental articles for ladies are embroidered with coloured silks, or dyed moose hair. Their wigwams are always built of it, and they use it for water-vessels, drinking-cups, and an almost endless variety of purposes. They sometimes manage to boil water in this bark, when split very thin, and in that state they frequently use it as paper. But the most important use of this bark, and for which no other can be used, is in the construction of canoes. To procure a proper piece for making a canoe, the largest, straightest, and smoothest trunks are selected. After the tree is cut down, a circular incision is made as far up the trunk as the bark is good, that is, just below the branches. A very careful examination is then made to ascertain the best side of the bark, in order that the most perfect portion may form the bottom of the canoe; this being ascertained, a straight incision is made, from the circular incision to the butt of the tree. The edges of the bark are next raised with wedges, and much precaution used to prevent any portion flying off too suddenly, and spoiling the whole. When the edges of the bark are fully cleared from the trunk of the tree, the bark is relieved from the pressure which was kept on it until then, and the whole bark of

the trunk flies off at once. A piece thus obtained was 22 feet in length, 56 inches in width at one end, and 48 inches at the other. It was subsequently formed into a large canoe of the Milicete fashion. These canoes are stitched together with fibrous roots of the white spruce, about the size of a quill, which are deprived of the bark, split, and supplied in water. The gunwales and ribs are formed of white cedar (*Cupressus thyoides*), and the cross-bars of sugar maple: the seams are coated with white spruce gum. The paddles are made either of the red-flowering maple, or the sugar maple; but the latter is preferred.

"*White Birch*—*Betula Populifolia*, is most frequently found in places scantily furnished with trees, where the soil is dry and meagre; in these situations it commonly rises to the height of 20 or 25 feet, and is generally associated with the aspen or poplar. Single trees which grow accidentally in moist and sheltered places, expand to an ampler size, and are sometimes 40 feet in height, yet not more than 9 inches in diameter. It is less abundant than the other species of the birch tribe, and is rarely found in groups. It is commonly seen by the side of highways growing singly on burnt land, or sandy soils which have been exhausted by cultivation, or which are too poor to produce crops. The trunk is clad in a bark as white or whiter than that of the canoe-birch; but its outer bark, when separated from the inner bark, is incapable of being divided like that of the canoe-birch, into thin sheets, which constitutes a very essential and most important difference. The wood is very soft, brilliant when polished, and perfectly white. From its speedy decay, and the inferior size of the tree, it is not employed for any use except for fuel.

"*Yellow Birch*—*Betula Lutea*, abounds in New Brunswick; it is always found on cool and rich soils, with ash, hemlock, spruce, and black spruce. In these situations it attains its largest size, which is from 60 to 70 feet in height, and more than 2 feet in diameter. It is a beautiful tree; its trunk is nearly uniform in diameter, straight and destitute of branches for 30 or 40 feet. It is particularly remarkable for the colour and arrangement of its outer bark, which is of a brilliant golden yellow, and which frequently divides itself into very fine strips, rolled backwards at the ends, and attached in the middle. The young shoots and the leaves at their unfolding are downy. Towards the middle of summer, when fully expanded the leaves are perfectly smooth, except the foot-stalls which remains covered with a fine short hair. The leaves about 3½ inches long, 2½ inches broad, oval acuminate, and bordered with sharp and irregular teeth. The leaves, the bark, and the young shoots, have an agreeable taste, and similar to those of the black birch, though less sensible, which they lose in drying. The wood is inferior in quality and appearance to that of the black birch; it never assumes as deep a shade, but it is strong, and when well polished makes handsome furniture. It is found by experience to be every way proper for that part of the frame of vessels which always remains under water. It furnishes an excellent combustible. The young saplings are employed in New Brunswick almost exclusively for the hoops of casks. Brooms are made of the twigs, and the Indian women make brooms of the wood by splitting it up. The bark is valuable for tanning. Russian leather is prepared with empyreumatic oil from the bark of this tree, whence its peculiar odour. Yellow birch timber is exported to Europe in considerable quantities, but it is shipped

with black birch, and passes with that species indiscriminately under the general name of birch.

"*Black Birch*—*Betula Lenta*.—The agreeable foliage of the black birch, and the valuable properties of its wood, render it the most interesting of the American birches. In Canada it is called cherry birch; in New Brunswick it is always called black birch. It grows in preference in deep, loose, and cool soils; in these situations it obtains its greatest expansion, sometimes exceeding seventy feet in height, and three feet in diameter. Its vegetation is beautiful, and in a congenial soil its growth is rapid. It is stated in the "Annals of the Arts," that a tree of this species attained the height of forty-five feet in nineteen years. The black birch is one of the earliest trees to renew its foliage. The leaves, during a fortnight after their birth, are covered with a thick, silvery down, which disappears soon after. They are about two inches long, toothed, heart-shaped at the base, pointed at the summit, of a pleasing tint, and fine texture like the leaves of the cherry-tree. The young shoots are brown, smooth, and dotted with white, as are also the leaves. When bruised, the leaves diffuse a very sweet odour, and as they retain the property when dried and carefully preserved, they afford an agreeable infusion, with the addition of milk and sugar.

"The bark upon the trunk of trees less than eight inches in diameter, is smooth, grayish, and perfectly similar in colour and organisation to that of the cherry-tree. On old trees the outer bark is rough, and of a dusky gray colour; it detaches itself transversely at intervals, in hard, ligneous plates, six or eight inches broad. Michaux the younger calls this birch one of his favourite trees, and recommends it to the lovers of foreign vegetables, as eminently adapted by the beauty of its foliage and the agreeable colour of its leaves, to figure in the parks and gardens of Europe. He strongly recommends the inhabitants of the old world to introduce it into their forests; and particularly mentions the north of France, England, and Germany, as favourable to its growth, from the greater humidity of the climate.

"The wood when freshly cut is of a rosy hue, which deepens by exposure to the light. Its grain is fine and close, whence it is susceptible of a brilliant polish; it possesses also a considerable share of strength. The union of these properties render it superior to all other species of birch, whether European or American. The weight of a cubic foot of the wood of the black birch, when seasoned, is forty-five pounds. The specific gravity of water being estimated at 1,000, that of seasoned black birch wood is 720. When green, this wood floats with difficulty, and sinks after a time, unless supported by timber of a less specific gravity. When well seasoned (which can only be done thoroughly under water) it makes very strong and useful articles of furniture, for which it would be more generally used but for its constant tendency to warp. It is much used in New Brunswick in ship-building, for the keel and lower timbers of vessels; and as it is almost imperishable under water, it is well adapted for planking, piles, foundation timber, sluices, and, in general, for any purpose where it is constantly wet.

"Black birch wood is now exported in large quantities to the United Kingdom, in the form of squared timber, and sawn planks: the quantity of each is annually on the increase. It has been suggested by a gentleman well acquainted with the timber trade, that sawed birch staves might be made a profitable

article of export to Great Britain, for making herring barrels on the British coasts.

"The wood of this species of birch furnishes excellent fuel, second only to that of the sugar maple. The inner bark is full of tannin. The sap, drained by incision in March and April, makes excellent vinegar, and a pleasant weak wine may be obtained from it by boiling and fermentation.

"The alder is found everywhere in New Brunswick, frequently growing along the sides of brooks, and abounding still more in places covered with stagnant water. As the roots of the alder penetrate to a great distance, it contributes more effectually than most other trees to support the banks at the season of the overflowing of the waters.

"The ordinary dimensions of the common alder is about ten or twelve feet in height, and two or three inches in diameter. Its leaves are of a beautiful green, distinctly furrowed on the surface, and doubly toothed at the edge.

"The black alder is much larger than the common alder, being sometimes eighteen or twenty feet in height, and three or four inches in diameter. Its leaves are similar in shape, but are easily distinguishable by their different tint and superior size; they are of a pale bluish-green, and a third larger than those of the common alder. The bark of the trunk, and of the secondary branches, is smooth, glossy, and of a deep brown colour, sprinkled with white. Both species grow in cool, moist places, on the banks of rivulets and in swamps. As their trunks are generally straight, tapering gradually from base to summit, garnished with numerous branches, bending rather close around the stock, they grow in great numbers in a small space.

"The wood, when first laid open, is white, but it soon becomes reddish by contact with the air. The small size of both species mentioned, prevents their being of any very great use in the arts. The alder takes a better black than any other wood; when polished and varnished, it affords a good imitation of ebony. With sulphate of iron, the bark forms a black dye for colouring wool; it is sometimes used by hatters in the United States for dyeing hats. A cubic foot of alder wood, in a dry state, weighs from 34 to 50 pounds. It soon rots when exposed to the weather or to damp; but it is extremely durable in water or in wet ground.

"*Cherry*.—The trees of this genus are deciduous, with smooth serrated leaves, and white flowers. The two species which have been noticed in New Brunswick are more or less abundant, in proportion to the dryness and humidity of the soil, which are alike unpropitious. They stand less in need of shelter than any fruit-bearing tree whatever, and may often be employed on the margins of orchards, or for surrounding kitchen-gardens to form a screen against high winds. They are said to thrive best when unmixed with other trees, and they suffer grass to grow beneath their shade. According to experiments which have been made, it is stated that no tree of considerable size bears transplanting better than the wild cherry. As in the case of all large trees which have been removed, they suffer a check by the operation; but from this they generally recover in the course of two, or at most three, seasons. As a tree, one of its valuable properties is the food and protection which it affords to numerous species of birds. This is one reason why the cultivation of the wild cherry is so generally encouraged in the forests of Britain, of Belgium, and of France, as it not only increases the

number of birds by supplying them with nourishment, but is the means of destroying countless insects which these important and useful creatures devour. In all ornamental plantations, hedge-rows, and avenues, wild cherry-trees are desirable objects of culture on this account, as also for their hardihood, and the great beauty of their flowers and fruit, which are produced in the greatest profusion in their respective seasons of the year.

"In France the wild cherry-tree is highly prized for the food it supplies to the poor; and a law was passed, as long ago as 1669, commanding the preservation of all cherry-trees in the royal forests: in consequence of which they became so numerous, that there was no longer room for the underwood to grow; when, as usual, going to the other extreme, most of them were cut down. This measure, it was remarked, was a great calamity to the poor, who, during several months of the year, lived, either directly or indirectly, on the produce of the *merisier* or wild cherry-tree. Soup made of the dried fruit, with a little bread and butter, was the common nourishment of the woodcutters and charcoal-burners of the forest during the winter. This fruit is much used in Europe at present, to make jelly or *rob*, and in the manufacture of *liqueurs*, such as cherry-brandy and *ratafia*. *Kirschenschasser*, an ardent spirit much used in Germany and Switzerland, is also made of it; and the famous liqueur *Maraschino*, is the product of a small acid cherry that abounds in the north of Italy, at Trieste, and in Dalmatia.

"*Wild Cherry Tree—Cerasus Virginiana.*—In New Brunswick seldom exceeds 30 or 40 feet in height, with a trunk 6 or 10 inches in diameter. Its bark is so peculiar as to render it distinguishable at first sight, when the form of the leaves cannot be discerned; it is blackish and rough, and detaches itself in narrow, semi-circular, hard, thick plates, which adhere for a time to the tree before dropping off; these are renewed after a considerable period.

"The trunk is usually straight for about one-fourth of its height, where it ramifies into a spreading summit of a handsome outline; but its foliage is too thin to display that massive richness which gives so much beauty to the maples, and many other trees. The leaves are usually about four inches long, toothed, very much pointed, and of a beautiful smooth, shining green, with two or more small reddish glands at the base. The flowers are white, and occur in spikes, which when fully expanded, have a fine effect. The fruit is about one-fourth of an inch in diameter, of a roundish form, purplish black colour, and edible, but slightly bitter to the taste. It arrives at maturity in August or September, when it affords great nourishment to several species of birds.

"There is a variety of the wild cherry tree known in New Brunswick as the 'choke-cherry,' which has been designated *Cerasus Virginiana præcox*. This variety differs from the species in having broadly-oval leaves, abruptly pointed, being sometimes sub-cordate at the base, very sharply, and often doubly-toothed, and generally hairy in the axils of the veins beneath.

"The petals are orbicular; the fruit sub-globose, of a glossy scarlet, red when ripe, sweet and pleasant, but so very astringent that it dries the mouth and throat like the juice of spruce cones when swallowed. It usually ripens its fruit several weeks earlier than the species of which it is a variety, and hence the name *præcox*.

"The wood is of a dull, light, red tint which deepens with age. It is compact, fine-grained, takes a

brilliant polish, and, when perfectly seasoned, is not liable to warp. In the United States, where this tree grows to a very large size, it is extensively used by cabinet-makers for almost every species of furniture; and, when chosen near the ramification of the trunk, it rivals mahogany in beauty. The bark of the branches and of the roots is there collected by herb-vendors, and brought to market in pieces or fragments. The bark of the root is regarded as the best, is destitute of epidermis or outer bark, of a reddish-brown colour, brittle, easily pulverised, and presents, when broken, a grayish surface. When fresh, the odour is prussic, which is lost in a measure in drying, but regained by maceration; the taste is aromatic, prussic, and bitter. It is stated, undoubtedly, to be a useful tonic, and to possess, in some degree, narcotic and anti-spasmodic properties.

"The fruit is employed in New Brunswick to make a cordial, by infusion in rum or brandy, with the addition of sugar; and, when carefully made with brandy, it is superior to the *Kirschenschasser* imported from Copenhagen.

"*Northern Cherry Tree—Cerasus Borealis.*—A handsome small tree, growing to a height of 20 or 30 feet, with a trunk 6 or 8 inches in diameter, and covered with a smooth brownish bark, which detaches itself laterally. Its leaves are from 3 to 5 inches long, oval, toothed, and very sharp pointed. The flowers put forth in May or June, and occur in small white bunches, which give birth to a small, red, intensely-acid fruit, which arrives at maturity in August. The fruit is not very abundant even on the largest trees.

This tree, like the canoe birch, is said to offer the same remarkable peculiarity of reproducing itself spontaneously, in old cultivated fields, or such parts of the forest as have been burnt over. Of all the trees of North America no one is so nearly allied to the common cherry (*Cerasus vulgaris*) as the present species, and hence it has been recommended as a suitable stock to graft that cherry upon. The wood is exceedingly hard, fine-grained, and of a reddish hue, but the inferior size of the tree forbids its use in the mechanical arts.

"*Poplar.*—At present only two species of trees of this genus have been recognised in New Brunswick. The wood of the European aspen lasts long exposed to the weather, and most poplars are said to be very durable in a dry state, agreeably to the English woodman's adage—

"Cover me well, to keep me dry,
And heart of oak I do defy."

"The wood of most of the species is described as making very good flooring for bed-rooms, and places where there is not much wear, and it has the advantage of not catching fire readily; or, as Evelyn, has it, 'The poplar burns untowardly, and rather moulders away, than maintains any solid heat.' The wood of the Lombardy poplar is recommended for cheese-rooms and farm-houses in general, because neither mice nor mites will attack it.

"*Balsam Poplar—Populus Balsamifera*, best known in New Brunswick by the name of 'Balm of Gilead,' on the rich alluvial lands on the borders of the River St. John, above Fredericton, and along the valley of the Tobique. The largest of the trees of the species reach the height of 80 feet, and are upwards of 2 feet in diameter.

"In the spring, when the buds begin to develop, they are abundantly coated with a yellowish glutinous

substance, of a very agreeable smell, and though this exudation diminishes at the approach of summer, the buds retain a strong balsamic odour. This odour is very much admired; and as this species of poplar grows very rapidly, and is easily transplanted, or propagated from cuttings, it is much in request as an ornamental tree. It will grow in all soils, but worst in clay; it impoverishes the land, destroys the grass, and the numerous shoots of the roots spread so near the surface of the earth, that they permit nothing else to grow, but rise in all quarters whether they are wanted or not.

"Hitherto the wood of the balsam poplar has not been brought into very profitable use. It is extremely light, white, smooth, woolly, and soft; and there are, no doubt, many purposes for which it might be advantageously employed.

"*American Aspen*—*Populus Tremuloides*.—The ordinary height of the smaller species of poplar is about thirty feet, and its diameter five or six inches. The larger variety (which has been described as a distinct species, by the designation of *P. grandidentata*, but is believed to be only a variety of this species) grows to the height of fifty or sixty feet, and the diameter of eighteen inches or more; it flourishes as well on the border of swamps as on uplands. The straight trunk of the aspen is covered with a smooth greenish bark, which is rarely cracked, except on the base of the oldest trees, where it becomes furrowed. The catkins which spring from the extremity of the branches are composed of silky plumes, and of an oval form, somewhat more than an inch in length. The leaves are about two inches broad, narrowed at the summit, and supported by long footstalks. On stocks, seven or eight feet in height they are nearly round, and are bordered with obtuse, irregular teeth; on young shoots they are of twice the size mentioned, heart-shaped, and pointed at the summit. Of all the poplars of America this species has the most tremulous leaves; the gentlest air suffices to throw them into agitation.

"The wood of the smaller variety of the American aspen is light, soft, destitute of strength, and of little utility. It is felled only to disencumber lands, which are being cleared for cultivation. As the wood may be divided into very thin laminae, it is sometimes used for the manufacture of ladies' and children's bonnets and light summer-hats, which are very pretty when new, but not very durable. There is great superiority in the wood of the larger variety of this species of poplar over that of the smaller variety. It is white, fine, and strong; it gives a firmer hold to nails, and is not liable to warp or split. The largest and best specimens of this beautiful wood is used for the ornamental work of ships' cabins, in conjunction with birds'-eye maple. It has a very silky lustre, and, when varnished and polished, bears a very close resemblance to satin wood, to which it is very little, if at all inferior, for ornamental purposes. The weight of a cubic foot of the large variety from Miramichi has been found to be twenty-six pounds.

"The Acadian French inhabitants of the northern coast of New Brunswick, use the wood for their *sabots*, or wooden shoes, and also for bowls, trays, and a variety of purposes in domestic economy. The superior size of this poplar renders it easily recognised when met with in the forest by the woodman; and its timber should be preserved, not only for its beauty, but for the variety of useful and ornamental purposes to which it may be applied. The bark of the aspen is the principal food of beavers, who cut

down the smaller trees, as well to procure food, as to build with them their singularly ingenious dams for creating artificial ponds.

"*Beech*.—In North America, as in Europe, the beech is one of the most majestic trees of the forest. Beech, says White, of Selborne, is one of the most grand and lovely of all the forest trees, whether we consider its stately trunk, its smooth silvery rind, its glossy foliage, or graceful spreading pendulous branches. No tree, says another writer, is more beautiful when standing singly in parks, or ornamental grounds, as it throws out its branches very regularly, and feathers almost to the ground. In woods or groves it grows clear of branches to a considerable height. Virgil was right in choosing the beech for its shade, for no tree forms so complete a roof; but no verdure is found under its shade. The beech is most pleasing in its juvenile state. A light airy young tree, with its spiry branches hanging in easy forms, is often beautiful.

"*White Beech*—*Fagus Sylvestris*, is more slender and less branchy than the red beech; but its foliage is superb, and its general appearance magnificent. The leaves are oval, pointed, smooth, shining, and bordered, in the spring, with soft, hairy down. The sexes are borne by different branches on the same tree; the barren flowers are collected in pendulous, globular heads, and the others are small and of a greenish hue. The fruit is in an erect capsule, covered with loose, flexible spires, which divides itself at maturity into four parts, and gives liberty to two triangular seeds. The bark upon the trunk of the beeches is thick, gray, and, on the oldest stocks, smooth and entire. The perfect wood of this species bears a small proportion to the sapwood, and frequently occupies only 3 inches in a trunk 18 inches in diameter. The specific name of "white beech" is derived from the colour of its alburnum or sapwood. The wood of this species is of very little value except for fuel. In Ohio, the bark of the white beech is used for tanning, and the leather made with it is said to be white and serviceable, and inferior only to that prepared with oak bark.

"*Red Beech*—*Fagus Ferruginea*.—This species of beech is almost exclusively confined to the north-eastern parts of the United States, and the provinces of Canada, New Brunswick, Nova Scotia, and Prince Edward Island. In some parts of New Brunswick, and generally in Prince Edward Island, it is so abundant as to constitute extensive forests, the finest trees growing on fertile, level, or gently sloping lands, which are proper for the culture of grain. Its name is derived from the colour of its wood, and not from its leaves. The red beech equals the white beech in diameter, but not in height; and, as it ramifies nearer the earth, and is more numerous divided, it has a more massive summit, and the appearance of more tufted foliage. Its leaves are equally brilliant with those of the white beech, a little larger and thicker. They become a pale yellow in the autumn, and they frequently remain on the tree during the winter, retaining that colour. The fruit is of the same form as that of the white beech, but is only half as large, and is garnished with firmer and less numerous points. To these differences must be added an important one in the wood. A red beech, 15 or 18 inches in diameter, has not more than 3 or 4 inches of sapwood; while a white beech, of the same size, has 13 or 14 inches of sapwood, and very little heart of any value. The wood is stronger, tougher, and more compact than the white, and it bears a very strict analogy to

the European beech. When perfectly seasoned, it is not liable to warp; and a cubic foot of it then weighs from 43 to 53 pounds.

"Representing the strength of oak by 100, that of beech will be 103; representing the stiffness of oak by 100, that of beech will be 77; representing the toughness of oak by 100, that of beech will be 138. Hence it appears that the oak is superior in stiffness, but neither so strong nor tough. Before iron rails were introduced, much beech was used for railways for the collieries about Newcastle. The red beech is very durable when preserved from humidity, and incorruptible when constantly in the water; but it rapidly decays when exposed to the alternations of dryness and moisture. It is much esteemed in naval architecture for those parts of vessels which are constantly wet, and it is much used in Prince Edward Island. An old and experienced English ship-builder, residing at Richmond Bay, in Prince Edward Island, assured the writer that, on the lower part of vessels, he had known the red beech wood of the island sound at the end of 40 years; in such situations he considered it fully equal to English oak in strength and durability. The wood of the red beech is much esteemed for fuel, and its ashes afford good pot-ash. It serves for shoe-last, tool-handles, planes, and mallets; and sometimes chairs, bedsteads, and other articles of furniture are made of it.

"Sheep and goats eat the leaves of the beech. When gathered in autumn, before they are much injured by frost, the leaves, on account of their elastic quality, make better *paillasse*s than either straw or chaff, and they last seven or eight years. The nuts of the red beech are produced every second year. They are of a triangular form, with a smooth tough skin, and a fine interior pellicle adhering to the kernel. They are united in pairs, in capsules garnished with points, from which they escape about the 1st of October, the season of their maturity. In France and Germany an oil is extracted from the beech-nut, next in fineness to that of the olive, and which may be preserved longer than any other oil. But they seem to yield little oil in northern countries. Linnaeus says that, in Sweden, very little oil can be expressed from them, and the attempt has not yet been made in New Brunswick. Hogs fatten rapidly on beech-nuts, but the pork is not esteemed; bears, partridges, squirrels, and mice, feed on them largely. In Belgium very solid and elegant hedges are made with young beeches, placed 7 or 8 inches apart, and bent in opposite directions, so as to cross each other and form a trellis, with apertures 5 or 6 inches in diameter. During the first year they are bound with osier at the points of intersection, where they finally become grafted and grow together. As the beech does not suffer in pruning, and sprouts less luxuriantly than most other trees, it is perfectly adapted to this object.

"*American Hornbeam*—*Carpinus Americana*.—Ordinary stature from 12 to 15 feet, but it sometimes reaches 25 or 30 feet in height, and 6 inches in diameter. The trunk of the American hornbeam, like that of the analogous species in Europe, is obliquely and irregularly fluted, frequently through all its length. By its form, and by the appearance of its bark, which is smooth and spotted with white, it is easily distinguished when the leaves are fallen. It sheds its leaves in autumn, about the same time with the elm. During the time of its verdure it makes a good appearance, being well clothed with leaves, which are oval, pointed, finely denticulated, and of a deep,

strong, green colour. Cattle eat the leaves, but no pasture grows under its shade; it is easily transplanted, and bears lopping. The fructification is always abundant, and the aments remain attached to the tree long after the foliage is shed.

"The wood, like that of the European hornbeam, is white, and exceedingly compact and fine-grained. It is in great request among the farmers for axe handles, and for agricultural implements, or for such parts of them as require great strength. Cogs for mill-wheels are made of the wood, and are accounted superior to those made of the wood of the sugar maple, which is generally used for that purpose. In Scandinavia, the inner bark of the hornbeam is used to dye yellow; and the Indians of America use it occasionally for a similar purpose.

"*Iron Wood*—*Carpinus Ostrya* nowhere forms masses even of inconsiderable extent, but is loosely disseminated, and found only in cool, fertile, and shaded situations. It rarely reaches thirty-five feet in height, and twelve inches in diameter, and commonly does not exceed half these dimensions. In the winter, this tree is recognised by a smooth grayish bark, finely divided, and detached in strips not more than a line in breadth. The leaves are alternate, oval-acuminate, and finely and unequally denticulated. The fertile and barren flowers are borne at the extremity of different branches of the same tree, and the fruit is in clusters like hops, whence the specific name *ostrea*. The small, hard, triangular seed, is contained in a species of reddish, oval, inflated bladder, covered at maturity with a fine down, which causes a violent irritation of the skin if carelessly handled. The concentric circles of the wood are closely compressed, and their number, in a trunk of only four or five inches in diameter, evinces the length of time necessary to acquire this inconsiderable size. The Canadian-French call iron wood, *bois dur*, hard wood.

"The wood is perfectly white, compact, fine-grained, and heavy. To its inferior dimensions must be ascribed the limited use of a tree, the superior properties of whose wood are attested by its name. It is exceedingly valuable for all purposes to which its small size will permit it to be applied. Near New York brooms and scrubbing-brushes are made of iron wood, by shredding the end of a stick of suitable dimensions.

"ASH is a very rapid growing tree, and its wood differs more from difference of soil and situation than that of any other tree. The wood of ash soon rots when exposed either to damp or alternate dryness and moisture, but is tolerably durable in a dry situation. It is said that the best season for felling ash is from November to February; and that when felled in full sap, it is very subject to the worm. In such case, the wood is said to be much benefited by water seasoning. It is very much esteemed for its toughness and elasticity; and in consequence of these properties, it is useful whenever sudden shocks are to be sustained, as in various parts of machines, wheel-carriages, implements of husbandry, ship-blocks, tools, and the like. It has been found as useful in the arts of war as in those of peace, in ancient as well as in modern times:—

"From Pelion's cloudy top, an ash entire
Old Chiron fell'd, and shap'd it for his sire."

Pope's Homer.

"The wood is too flexible for the timber of buildings, and not sufficiently durable. Its texture is alternately compact and porous, the compact side of

the annual ring being the lighter coloured, which renders the annual rings very distinct. The drip of the ash is said to be very unfavourable to all other vegetable productions. It exhausts the soil very much; the roots spread widely near the surface.

"*White Ash*—*Fraxinus Americana*, is an interesting tree from the qualities of its wood, the rapidity of its growth, and the beauty of its foliage. It abounds in New Brunswick; a cold climate seems most congenial to its nature. The bark is of a white colour; on large stocks the bark is deeply furrowed, and divided into small squares, one to three inches in diameter.

"The most favourable situations for white ash are the banks of rivers, and the edges and surrounding acclivities of swamps, where the soil is deep and fertile. In such situations, it sometimes attains the height of 50 or 60 feet, with a diameter of 18 inches or more. The trunk is perfectly straight, and often undivided to the height of more than 30 feet.

"The leaves of the white ash are opposite, and composed of 3 or 4 pairs of leaflets, surmounted by an odd one. The leaflets, which are borne by short footstalks, are 3 or 4 inches long, about 2 inches broad, oval, pointed, rarely denticulated, of a delicate texture, and an undulated surface. Early in the spring, they are covered with a light down, of a pale green colour above and whitish beneath. As the contrast of colour between the surfaces is remarkable, and is peculiar to the species, Dr. Mechlenberg has denominated it *Fraxinus discolor*.

"The shoots of the two preceding years are of a bluish-gray colour, and perfectly smooth; the distance between their buds sufficiently proves the vigour of their growth.

"White ash is almost always accompanied by white elm, yellow birch, white maple, and hemlock and black spruce. The wood in young, thrifty trees, is very white, from the bark to the centre; but in large, old trees, the heart-wood is of a reddish tinge, and the sap-wood white. The weight of a cubic foot of this wood, when dry, varies from 34 to 52 lbs.; when the weight of a cubic foot is lower than 45 lbs., the wood is that of an old tree, and will be found deficient both in strength and toughness. Representing the strength of oak by 100, that of ash is 119; representing the stiffness of oak by 100, that of ash is 89; representing the toughness of oak by 100, that of ash is 160. The ash, therefore, exceeds both in strength and toughness, and in young wood the difference is still more considerable.

"The wood of the white ash is highly esteemed for its strength, suppleness, and elasticity. It is superior to every other wood for oars, and second only to hickory for handspikes. Besides its use by carriage and sleigh-makers, it is in very general use for agricultural implements and domestic wares, especially for the handles of spades, hoes, shovels, forks, rakes, and scythes. Cattle eat the leaves of ash greedily, but they are said to give a bad flavour to the butter.

"*Black Ash*—*Fraxinus Sambucifolia* is generally known by the name of 'swamp ash,' in the United States it is called 'water ash.' It requires a moist soil, exposed to longer inundations than the white ash, and is usually accompanied by the red-flowering maple, yellow birch, black spruce, and white cedar. It does not often exceed 40 feet in height, or 12 inches in diameter.

"The buds of the black ash are of a deep blue, and the young shoots of a bright green, sprinkled with dots of the same colour, which disappear as the sea-

son advances. The leaflets are of a deep green colour, smooth on the upper surface, and coated with red down upon the main ribs beneath; when bruised they emit an odour like that of elder leaves.

"The black ash is easily distinguished from the white by its bark, which is of a duller hue, less deeply furrowed, and has the layers of the epidermis applied in broad sheets. It is among the last trees which put forth in spring, and the earliest that lose their leaves in autumn. The very first frost that comes, not only causes its leaves to fade and become yellow like those of other trees, but blackens and shrivels them up, so that they fall in showers with the least breath of wind. The perfect wood is of a brown complexion and fine texture; it is more elastic than that of the white ash, but it is neither so strong nor so durable. It is a wood, therefore, not greatly in request. As it may be separated into thin, narrow strips, it is much used by the Indians for the manufacture of baskets. In the country these strips are also used for chair-bottoms.

"The black ash is liable to be disfigured with knobs, which are sometimes of a considerable size, and are detached from the body of the tree to make bowls and ornamental articles of turnery. The wood of these excrescences has the advantage of superior solidity, and, when carefully polished, exhibits singular undulations of the fibre. Dishes made of these knobs, may be seen in most of the Indian wigwams (especially in remote situations), which have been used for a great number of years, and are highly prized. The ashes of the wood of the black ash are said to be rich in alkali.

"*Willow*.—Many species of willow are found in the colonies, the greater part of which are susceptible of no useful employment. The three species here mentioned are distinguished only by their superior height, but they are all greatly inferior to European willow, in the size and properties of their wood. 1.

Black Willow—*Salix Nigra*; 2. *Champlain Willow*—*Salix ligustrina*; 3. *Shining Willow*—*Salix lucida*.

"The first of these three species (*Salix nigra*) is the most common of the American willows, and the most analogous to that of Europe. It rarely attains a greater height than 30 or 35 feet, and a diameter of 12 to 15 inches. It divides at a small height into several divergent, but not pendant limbs, and forms a spacious summit. The leaves are long, narrow, finely denticulated, of a light green, and destitute of stipule. In the uniformity of its colouring, the foliage differs from that of the European willow, the lower surface of which is whitish. Upon the trunk the bark is grayish, and finely chapt. Upon the roots, it is of a dark brown, whence may have been derived the specific name of the tree.

"The champlain willow (*Salix ligustrina*) is about 25 feet high, and 7 or 8 inches in diameter. Its first aspect resembles that of the black willow, but its leaves are longer, and accompanied at the base by stipule.

"The shining willow (*Salix lucida*) is best known in new Brunswick by the name of 'red willow,' from the brilliant red colour of the bark on the young shoots. It is found in moist but open grounds, and is more common on the edges of meadows and on the banks of streams than in the interior of the forests. The shining willow attains the height of 18 or 20 feet, but its ordinary elevation is 9 or 10 feet. The wood is white and soft, and the branches of each species are easily broken from the tree. Neither the wood nor the twigs are applied to any useful purpose.

"The long slender branches of the shining or red willow are sometimes used for baskets, for which, however, they are rather brittle, and are therefore of little value. The Melicete Indians scrape the bark from the young twigs, and when dry, mix it with their tobacco for smoking; they are very partial to the admixture, the odour of which is much more agreeable than that of pure tobacco.

"The roots of the black willow afford an intensely bitter decoction, which is considered in the country as a purifier of the blood, and as a preventative, and a remedy for intermittent fever.

"ELM.—There are two well-defined species of elm in New Brunswick, known as the white elm and red elm. A third species is supposed to exist, but it is not yet fully determined whether it is merely a variety of the white elm, or a distinct species. Every variety of elm is beautiful, and well adapted to make shady walks, as it does not destroy the grass; and its leaves are acceptable to cows, horses, goats, sheep, and swine. Silkworms are said to devour the tender leaves of elm with great avidity. Many insects feed upon the leaves, particularly the *Cicada ulmi* and *Aphis ulmi*; the latter generally curl the leaves, so as to make them a secure shelter against the weather. The bark of elm, dried and ground to powder, has been mixed with meal in Norway to make bread in times of scarcity. The flowers have a violet smell.

"White Elm—*Ulmus Americana* is found over an extensive tract of the North American continent, but it appears to be the most multiplied and to attain the loftiest height between the 42nd and 47th degrees of north latitude. It delights in low, humid, substantial soils, along the banks of rivers or streams, or on the borders of swamps where the soil is deep and fertile. It will grow, however, on any soil that is not too dry and barren, and in any situation within its natural limits, how much soever exposed. In New Brunswick the white elm stretches to a great height. In clearing the primitive forests a few stocks are sometimes left standing; and insulated in this manner, the tree appears in all its majesty, towering to the height of eighty or one hundred feet, with a trunk three or even four feet in diameter, regularly shaped, naked, and insensibly diminishing to the height of sixty or seventy feet, where it divides itself into two or three primary limbs. These limbs, not widely divergent near the base, approach and cross each other eight or ten feet higher, and diffuse on all sides, long, flexible, pendulous branches, bending into regular arches, and floating lightly in the air, giving to the tree a broad and somewhat flat-topped summit, of regular proportions and admirable beauty. When growing thus insulated, this tree is often marked by two or more small branches four or five feet in length, proceeding from near the first ramification, and descending along the trunk; and the larger branches or limbs, as also the trunk, are sometimes covered with little ragged twigs, as if clothed with tufts of hair. The bark of the white elm is light-coloured, tender, and very deeply furrowed. The leaves are four or five inches long, borne by short footstalks, alternate, unequal at the base, oval, pointed, and doubly denticulated. They are generally smaller than those of the red elm, of a thinner texture, and a smoother surface, with more regular and prominent ribs. This species differs, also, essentially from the red elm and European elm in its flowers and seeds. The flowers appear before the leaves, and are very small, of a purple colour, supported by short, slender footstalks, and united in

bunches at the extremity of the branches. In 1846, the white elm was noticed in flower, at Hampton Ferry, so early as the 20th of April; there was then no appearance of leaves.

"In autumn the bright golden foliage of the elm kindly mixes with the various hues of the poplar and the maples, which display all shades of red, and from the deepest crimson to the brightest orange. Its tints then contrast agreeably with the pale-yellow, sober foliage of the birch and the beech, with the different shades of brown on the bass wood and the ash, or with the buff-yellow of the larch. At that season, even the gloomy blackness of the resiniferous trees, by throwing forward the gayer tints, is not without its effect.

"The quality of the wood depends, in a singular degree, on the situation in which it grows. The rich 'intervalles' already mentioned are necessary to its perfection; but when grown in open situations, where it is vexed by the winds and exposed to all the influences of the seasons it is still firmer and more solid. The wood has less strength than the oak, and less elasticity than the ash, but it is tougher and less liable to split. It is said to bear the driving of bolts and nails better than any other timber. The wood is of a light brown colour, and is liable to decay when exposed to the alternations of dryness and moisture. It must be either wet or dry, in extreme; accordingly, it is proper for water-works, mills, pumps, aqueducts, and ship-planks beneath the water-line. It makes excellent piles and planking for wet foundations. The piles on which London bridge stands are chiefly of elm, and have remained six centuries without material decay; and several other instances of its durability in water have been noticed. When perfectly dry, the wood of the white elm weighs only thirty-three pounds the cubic foot. If cut transversely, or obliquely to the longitudinal fibres, it exhibits numerous and fine undulations, which are very beautiful when polished. The wood is an excellent combustible, and its ashes yield a large proportion of alkali.

"The bark of the white elm is said to be easily detached during eight months of the year; soaked in water, and supplied by pounding, it is sometimes used for making ropes and for the bottoms of chairs. In France the wood of elm is usually employed for mounting artillery, and for this purpose it is selected with the greatest care. The trees are cut to the proper dimensions, and the pieces are stored under shelter to dry during six or seven years; the precaution is even observed of turning them every six months, that the seasoning may proceed more uniformly. When fully seasoned, the wood is highly esteemed for the carriages of cannon, and for the gun-wales and blocks of ships.

"Red Elm—*Ulmus Rubra*.—This species of elm bears the names of red elm, slippery elm, and moose elm, but the first is most common. The Canadian French call it *orme gras*. The red elm is less multiplied than the white, and the two species are rarely found together, as the red elm requires a substantial soil free from moisture, and even delights in elevated and open situations, such as the steep banks of rivers. This tree is 50 or 60 feet high, and 15 or 20 inches in diameter. In the winter it is distinguished from the white elm by its buds, which are larger and rounder, and which, a fortnight before their development, are covered with a russet down. The flowers are aggregated at the extremity of the young shoots. The scales which surround the bunches of flowers are

downy like the buds. The leaves are oval, pointed, doubly denticulated, and larger, thicker, and rougher than those of the white elm. The bark upon the trunk is of a brown colour.

"The heart-wood is less compact than that of the white elm, coarse-grained, and of a dull red tinge. It has been remarked, that the wood, even in branches of 1 or 2 inches in diameter, consists principally of perfect wood. It is said to be stronger, more durable when exposed to the weather, and of a better quality than the wood of the white elm, although coarser in the grain. In the United States it is accounted the best wood for blocks, and its scarcity is the only cause of its limited consumption.

"*American Lime, or Bass Wood*—*Tilia*.—Although several species of the lime-tree are found in North America, yet but one species flourishes in New Brunswick, which is usually called bass wood. It is generally found associated with sugar maple and white elm.

"*Bass Wood*—*Tilia Americana*, is sometimes more than 80 feet high, and 4 feet in diameter; and its straight uniform trunk, crowned with an ample and tufted summit, forms a beautiful tree. The leaves are alternate, large, nearly round, finely denticulated, heart-shaped at the base, and abruptly terminated in a point at the summit. The trunk is covered with a very thick bark; the inner bark, separated from the outer, and macerated in water, is formed into ropes, and also the broad plaited bands used by the Indians for carrying their burthens. They formerly made their fishing lines and nets of this bark. The name bass wood is supposed to be a corruption from *bast*, which is applied to the European lime-tree by the rustics of Lincolnshire, because ropes were made from the bark.

"The twigs and buds of the bass wood tree are very glutinous when chewed, and afford considerable nutriment. In severe winters, when fodder is scarce, the farmers in Maine and Vermont, and sometimes in New Brunswick, drive their cattle into the woods of a morning, and fell a bass wood or other tree, on which they eagerly browse during the day. In winter this tree is easily recognised by the robust appearance of the trunk and branches, and by the dark brown of the colour on the shoots.

"In newly-cleared lands the stumps of the bass wood are distinguished by the numerous sprouts which cover them, whose growth can only be prevented by stripping off the bark, or by fire. The stumps of other large trees, the elm, sugar maple, and ash, left at the same height of 3 feet, do not produce shoots. The wood, when dry, weighs 35 pounds to a cubic foot. It is very white when green, but becomes of a light brown hue when seasoned. It is soft, easily worked, and is used for the panels of carriage bodies, seats of chairs, and the fans of fanning-mills. The wood is useless as fuel, being too full of sap when green, and of but little value when dry."

The following Table may be used for finding the *ultimate* transverse strength of any rectangular beam of timber:—

Rule.—When the beam is *fixed* at one end, and loaded at the other, the weight in pounds which it will support before breaking, will be obtained by multiplying the number opposite the kind of timber in the third column of the above table, by

the breadth and square of the depth of the beam both in inches, and dividing the product by the length, also in inches.

Table of the specific gravity, weight of a cubic foot, and relative transverse strength of different kinds of wood.

Names of Materials.	Specific Gravity.	Weight of 1 cubic foot in lbs.	Transverse Strength.
Ash (English)	0.72	45.	1,500
Ash (American)	0.64	40.	1,800
Ash (American Black)	0.54	33.7	861
Ash (American Swamp)	0.92	57.5	1,165
Beech (English)	0.77	48.2	1,556
Beech (American Red)	0.78	48.7	1,720
Beech (American White)	0.71	44.4	1,380
Birch (English common)	0.71	44.4	1,820
Birch (American Black)	0.67	41.9	2,000
Birch (American White)	0.65	40.6	1,604
Birch (American Yellow)	0.76	47.5	1,335
Cedar (Bermuda)	0.75	46.8	1,443
Cedar of Lebanon	0.33	20.6	1,493
Cedar (Canadian)	0.80	50.0	—
Cedar (American White)	0.36	22.5	766
Elm (English)	0.59	36.9	1,013
Elm (Canada Rock)	0.72	45.0	1,970
Fir (Mar Forest)	0.69	43.1	1,232
Fir (New England)	0.55	34.4	1,102
Hickory (American)	0.83	51.9	2,020
Hickory (American Bitternut)	0.87	54.4	1,465
Hickory (Canada)	0.88	55.0	1,800
Larch (Scotch)	0.60	37.5	1,200
Larch (American Tamarack)	0.44	27.5	911
Mahogany (Nassau)	0.81	50.6	1,750
Mahogany (Honduras)	0.53	33.1	1,503
Greenheart (Demerara)	0.98	61.2	2,600
Maple (soft, Canada)	0.68	42.5	1,694
Maple (Rock American)	0.75	46.8	700
Oak (English)	0.84	52.5	1,700
Oak (American White)	0.78	48.7	1,740
Oak (American Red)	0.95	59.4	1,672
Pine (Red)	0.66	41.2	1,500
Pine (American Yellow)	0.46	28.8	1,300
Pine (American White)	0.43	26.9	1,160
Pine American Pitch)	0.70	43.8	1,700
Spruce	0.50	31.4	1,346
Spruce (American Black)	0.77	48.2	1,036

Note 1. When the beam is *fixed* at one end and loaded uniformly throughout, the result obtained by the rule must be doubled. *Note 2.* When the beam is *fixed* at both ends and loaded in the middle, the result obtained by the rule must be multiplied by 6. *Note 3.* When the beam is *fixed* at both ends and loaded uniformly throughout, the result obtained by the rule must be multiplied by 12. *Note 4.* When the beam is *supported* at both ends and loaded in the middle, the result obtained by the rule must be quadrupled. *Note 5.* When the beam is *supported* at both ends and loaded uniformly throughout, the result obtained by the rule must be multiplied by 8. N.B.—Two-thirds of the foregoing results are reckoned fully sufficient for a permanent load.

CHAPTER III.

POPULATION, GOVERNMENT, RELIGION, EDUCATION, CRIME, AND INSTITUTIONS.

WHEN New Brunswick was first known to Europeans, it appears to have been inhabited by several different nations or tribes, of whom only two are yet in existence—the Mic-Macs and the Melicetes, or Morrisettes. The Mic-Macs speak a dialect of the Iroquois (or Six Nations), Huron, and other northern tribes. The Melicetes are descended from a Delaware or southern race; but in physical appearance they differ little. Both tribes are of a copper colour, with high cheek bones, hazel eyes, long, straight, coarse, black hair, and scanty beard. They are of rather tall stature, erect, very active, not remarkable for muscular strength, but with great powers of endurance; a journey of seventy miles a-day being not unfrequently performed under a heavy burden; bears, deer, and moose, are pursued, and overtaken by them; in ascending and descending dangerous rapids, no Europeans can compete with the Indians; and the quickness of their perceptions in tracing men and animals by the trail or scent, is surprising. This latter quality the American Indian possesses in common with the Australian and other savages; but he is superior in many respects to other uncivilized races, and his ultimate extinction, which seems now inevitable, is much to be regretted. Long before the introduction of Europeans the savage and exterminating warfare carried on between the different tribes, was fast thinning their numbers; but the small pox and other diseases communicated by Europeans, and the supply of spirits, in the use of which the Indian can exercise no moderation, have caused their rapid and almost complete extermination. The total number in the province was in 1841, of Mic-Macs, 935; of Melicetes, 442 = 1,377. Both tribes are scattered in families in different parts of the province, and many wander about in poverty and wretchedness; 14 tracts of land, containing 61,273 acres of land, have been set aside by government as Indian reserves for their use. Most of them have been nominally converted to the Roman Catholic faith, and no efforts have been spared by the British

government to protect and civilize the aborigines of the country. Although both tribes inhabit the same country, their language is totally distinct. The Lord's prayer in each language is as follows:—

The Lord's Prayer in the Mic-Mac Language.

Noorch enen waa-soke abin, chip-took, talwee-sin me-gay-day-de mek. Waa-soke-te-lee-daa-nen chip-took igga nam-win oo-la ne-moo-lek naa-dee la tay se-nen. Naa-tel waa-soke ai-keek chip-took ta-lee-aka-doolek ma-ga-mi guek ay e-mek. Tel-la-moo-koo-be-ne-gal es-me-a gul opch nega-a-tah kees-took igga-nam-win nes-el-co-nen. Ta-lee a-bik-chik-takaa-chik wi-gai-nee-na-met-nick elk-keel-nees-kaam a-bik chic-toc-in el-wa-wool-ti-jeck. Mel-kee-nin maach win-chee-gul mook-ta-gaa-lin hees-e-na waam-kil win-chee-gukl ko qui-ak too-ack-too-in.—*Quebec Version.*

The Lord's Prayer in the Melicete Language.

Me-tox-sen-aa spum-keek ay-e-en saga-mow-ee tel-mox-ee'en tel-e-wee-so-teek. Cheeptooke wee-chee-u leek spum-keektaun e-too-cheesauk-too leek spum-a kay-e'en. Too-eep-nankna-meen kes-e kees-akah-keel wek-a guleek el-me-kees-kaak keel-mets-min a-woolee. Ma-hate-moo-in ka-tee a-lee-wa-nayool-te-ek el mas we-che-a keel mecoke-may-keel nema-hate-hum-too-mooin.

Each tribe has laws peculiar to itself, but a grand council is held annually at Pleasant Point, on the St. Croix river, of chiefs and delegates of the Penobscots, Mic-Macs, and Melicetes, where friendly relations are renewed; regulations to prevent collision in hunting and fishing established; and measures for the general weal discussed and adopted. They say that the "Great Spirit" has permitted the "pale faces" to come into the country to kill the game, catch fish, and cut down trees, but that they are the lords of the soil, and the rightful owners of the land, the water, and the sky. Their belief in a resurrection is manifested by their burying with the dead the implements and trinkets he used on earth, and which, they believe, he will require in another world.

The early European settlers in the province were composed of American loyalists, who exiled themselves from their native country, in order to remain subjects of the crown of Britain. In 1783, 3,000 of these meritorious people arrived at St. John's from Nan-tucket, and joined a few families, who had migrated from New England in 1762, and settled at Mangerville, on the St. John's

river. These were joined by others, and by disbanded soldiers from provincial regiments, and subsequently by emigrants from Europe and by some Acadians. The hardships endured by the early inhabitants were very great—famine and cold caused much misery, but the energies of the Anglo-Saxon race carried them through all difficulties, until, in the language of Dr. Gesner, they have "finally covered the banks of the noble St. John with rich fields, villages, and cities."

The population has thus increased since 1783—

1783	11,457	1824	74,176
1803	27,000	1834	119,457
1817	35,000	1840	156,162

The estimated population of New Brunswick at the beginning of 1848, was 208,012, distributed as follows:—County of Ristigouche, 4,214; Gloucester, 10,334; Northumberland, 19,493; Kent, 9,769; Westmoreland, and Albert, 23,581; King's, 19,285; St. John, 43,942; Queen's, 10,976; Sunbury, 5,680; York, 18,660; Carleton, 17,841; Charlotte, 24,237. Between 1834 and 1848, in the space of 14 years, the population has been nearly doubled; not, however, by births only, but also by emigration. Yet there is abundant room, and, indeed, great lack of fresh settlers, for there are nearly 80 acres of area to each mouth in the province.

Comparative Statements of the Increase of the Population since the Year 1824.

Counties.	Total of persons in the year 1824.	Counties.	Total of persons in the year 1834.	Increase.	Counties.	Total of persons in the year 1840.	Increase.
York	10,972	York	10,478	8,999	York	13,995	3,517
Saint John	12,907	Carleton	9,493		Carleton	13,381	3,888
King's	7,930	Saint John	20,668		Saint John	32,957	12,289
Queen's	4,741	King's	12,195		King's	14,464	2,269
Sunbury	3,227	Queen's	7,204		Queen's	8,232	1,026
Westmoreland . . .	9,303	Sunbury	3,838	611	Sunbury	4,200	422
Northumberland . .	15,829	Westmoreland . . .	14,205	4,902	Westmoreland . . .	17,686	3,481
		Northumberland . .	11,170	9,695	Northumberland . .	14,620	3,450
		Kent	6,031		Kent	7,477	1,446
		Gloucester	8,323		Gloucester	7,751	2,689
Charlotte	9,267	Charlotte	15,852	6,585	Ristigouche	3,161	2,326
Grand Total in 1824	74,176	Grand Total in 1834	119,457	45,281	Charlotte	18,178	
					Grand Total in 1840	156,162	36,705

The paucity of inhabitants in some counties is remarkable: in Ristigouche there were in 1840, *four hundred acres* of area to each inhabitant; in Northumberland, *two hundred and three*; in York, *one hundred and sixty-four*; in Kent, *one hundred and thirty-eight*; and in Gloucester, *one hundred and thirty-five*. New Brunswick might, with ease, sustain ten times its present population.

The society at St. John's and Fredericton is composed of the civil and military servants of the crown, professional men, and merchants, who constitute the basis of colonial society in all our settlements; and are distinguished by the courtesy and intelligence which mark the same class in England. In the middle and lower classes, the habits and manners of the United States predominate; but all classes unite in loyalty to their sovereign, and attachment to the parent state. The number of charitable institutions—the efforts made for the diffusion of instruction—and the attention paid to the ordinances of religion, indicate the benevolence and piety of the people.

The women of New Brunswick are gene-

rally handsome, and of a fair complexion; the higher class are well educated, and often highly accomplished.

Form of Government.—Similar to that of Canada and Nova Scotia. The affairs of the province are administered, for the sovereign, by a lieutenant-governor, aided by an executive council, consisting of 8 members; a legislative council of 17 members; and a House of Assembly of 39 representatives of the people.

The different Assemblies or Parliaments of New Brunswick have been as follows:—

Time of Meeting.	Time of Dissolution.
1786 . . . 3rd Jan.	1792 . . . 7th Dec.
1793 . . . 12th Feb.	1795 . . . 24th Dec.
1796 . . . 9th Feb.	1802 . . . 10th May
1803 . . . 9th Feb.	1809 . . . 11th July
1810 . . . 27th Jan.	1816 . . . 20th July
1817 . . . 4th Feb.	1819 . . . 24th March
1820 . . . 2nd Feb.	1820 . . . 15th May
1821 . . . 13th Jan.	1827 . . . 24th May
1828 . . . 14th Feb.	1830 . . . 13th Sept.
1831 . . . 7th Jan.	1834 . . . 7th Nov.
1835 . . . 20th Jan.	1837 . . . 18th Aug.
1837 . . . 29th Dec.	1842 . . . 1st Dec.
1843 . . . 31st Jan.	1846 . . . 16th Sept.
1847 . . . 28th Jan.	

Population of the Province of New Brunswick in the year 1840, according to the latest Census taken by direction of the Provincial Legislature.

City, County, or District.	Inhabited Houses.	Whites.				People of Colour.				Total of Persons.	Places of Worship.					Estimated quantity of cleared Land. Acres.
		Males above 16.	Males under 16.	Females above 16.	Females under 16.	Males above 16.	Males under 16.	Females above 16.	Females under 16.		Church of England.	Presbyterian.	Methodist.	Baptist.	Roman Catholic.	Other Denominations.
YORK:—																
Fredericton, City	489	1,061	829	1,166	798	28	43	48	29	4,002	2	1	1	1	1	1,696
Saint Mary	318	610	530	469	523	3	3	3	1	2,158	2	0	2	2	0	6,117
Douglas	424	656	650	595	634	30	22	30	13	2,630	2	1	2	2	0	9,038
Kingsclear	262	464	410	386	417	25	29	35	26	1,792	1	0	0	1	1	11,997
Queensbury	162	296	279	254	245	12	15	20	13	1,144	1	0	0	2	0	7,007
Prince William	149	256	254	193	213	6	4	7	10	942	1	0	1	0	0	3,320
Southampton	85	167	146	120	142	0	0	0	0	575	0	0	0	0	1	2,241
Dumfries	116	219	188	158	187	0	0	0	0	752	1	0	0	0	0	3,402
CARLETON:—																
Woodstock	482	906	758	769	745	3	2	2	1	3,186	3	1	1	0	1	9,757
Northampton	76	136	138	124	109	1	0	0	0	508	0	0	0	0	0	1,770
Kent	61	122	133	88	117	6	3	2	2	473	0	0	0	0	0	2,008
Brighton	170	305	337	264	294	0	0	0	0	1,200	0	0	0	1	0	4,842
Perth	54	105	86	74	95	2	0	0	0	362	0	0	0	0	0	1,283
Wicklow	115	208	180	168	188	0	0	0	0	744	0	0	0	0	0	2,500
Wakefield	330	612	651	511	559	5	0	0	5	2,358	0	0	1	2	0	6,650
Andover	87	184	147	119	137	0	0	0	0	587	0	0	0	0	0	2,643
Madawaska	542	975	1,000	862	1,034	2	0	0	0	3,963	0	0	0	0	3	18,500
SAINT JOHN:—																
City of Saint John—North District	700	2,643	1,982	2,020	1,890	29	10	37	14	9,516	2	1	1	1	1	0
City of Saint John—South District	718	2,440	2,079	2,784	2,137	73	10	121	65	9,765	0	1	1	1	0	2
Parish of Portland	455	1,783	1,322	1,825	1,239	11	7	15	5	6,207	2	0	1	1	1	1,071
" Carleton	158	387	327	369	327	4	10	7	4	1,435	1	0	0	0	2	446
" Lancaster	219	426	381	357	351	24	21	25	17	1,602	1	0	1	0	0	4,635
" Saint Martin's	264	640	465	438	460	0	0	0	0	1,973	0	0	0	1	1	5,311
" Simonds—North District	211	345	291	276	253	30	16	46	17	1,274	2	0	0	0	1	3,581
" Simonds—South District	176	359	221	254	239	21	28	30	23	1,185	0	0	1	0	0	7,515
KING'S:—																
Kingston	303	545	457	520	465	5	5	8	4	2,009	2	0	0	1	1	10,960
Sussex	342	592	513	522	506	17	12	11	5	2,178	1	0	1	1	0	8,914
Hampton	278	655	478	476	445	10	4	1	0	2,072	2	0	1	1	0	5,101
Norton	159	295	242	256	190	10	9	0	6	1,017	1	1	1	1	0	6,298
Westfield	228	402	454	377	416	5	0	3	4	1,661	1	0	1	1	0	9,518
Springfield	268	426	438	419	423	7	8	4	8	1,733	1	1	1	2	0	6,450
Greenwich	160	287	255	291	236	2	4	2	3	1,080	1	0	0	1	0	12,394
Studholm	305	585	550	441	400	1	1	1	0	1,988	1	0	1	2	0	3,302
Upham	135	69	250	188	217	1	0	1	0	726	1	1	0	2	0	3,825
QUEEN'S:—																
Gazetown	117	234	192	228	186	6	1	9	8	855	1	0	0	1	1	3,366
Canning	120	265	213	236	238	0	0	0	0	952	1	0	1	2	0	8,892
Wickham	168	306	314	263	318	0	0	0	0	1,201	0	0	0	2	0	7,774
Waterborough	172	354	302	325	322	8	8	4	6	1,329	1	0	0	2	0	964
Brunswick	33	62	57	53	45	0	0	0	0	220	0	0	0	0	0	6,790
Hampstead	131	233	191	190	229	8	11	8	9	879	1	0	0	0	2	5,710
Johnston	155	294	214	243	279	0	0	0	0	1,030	0	0	0	0	1	4,459
Petersville	140	232	232	188	214	0	0	0	0	856	1	0	0	0	1	1,810
Chipman	132	245	239	181	227	1	0	2	2	900	0	0	0	0	0	2,205
SUNBURY:—																
Maugerville	79	145	129	146	135	0	1	0	0	556	1	0	0	1	0	3,234
Sheffield	140	305	275	254	290	4	1	4	1	1,134	0	1	1	0	0	3,101
Burton	157	325	304	264	249	0	0	0	2	1,144	1	0	0	0	1	2,589
Lincoln	78	156	162	138	136	0	0	1	0	593	0	0	0	0	0	1,133
Blissville	119	235	224	183	191	0	0	0	0	833	0	0	0	0	2	17,207
WESTMORELAND:—																
Dorchester	417	750	805	770	738	0	1	1	2	3,067	1	0	1	0	1	15,924
Sackville	329	668	573	581	537	2	1	3	1	2,366	1	0	3	1	0	10,029
Westmoreland	186	343	347	335	365	11	12	6	17	1,436	1	1	2	1	0	10,390
Botsford	265	436	403	406	459	0	2	1	0	1,767	0	1	1	0	2	6,479
Shediac	278	463	514	428	498	0	2	1	6	1,909	1	0	0	0	1	7,076
Moncton	202	391	414	339	385	0	0	0	0	1,529	0	0	0	1	1	7,454
Salisbury	212	378	368	333	347	0	0	0	0	1,426	0	0	1	3	0	6,110
Coverdale	83	167	160	164	130	2	0	2	0	625	0	0	0	1	0	5,823
Hillsborough	145	261	263	245	281	0	0	0	0	1,032	0	0	1	1	0	6,722
Hopewell	132	259	288	230	244	0	0	0	0	1,021	0	0	0	1	4	7,008
Harvey	218	368	405	376	376	0	0	0	0	1,488	0	0	0	2	1	0

Population of the Province of New Brunswick in the year 1840, according to the latest Census taken by direction of the Provincial Legislature—(continued.)

City, County, or District.	Inhabited Houses.	Whites.				People of Colour.				Total of Persons.	Places of Worship.					Estimated quantity of cleared Land.
		Males above 16.	Males under 16.	Females above 16.	Females under 16.	Males above 16.	Males under 16.	Females above 16.	Females under 16.		Church of England.	Presbyterian.	Methodist.	Baptist.	Roman Catholic.	Other Denominations.
NORTHUMBERLAND:—																
Newcastle	404	833	679	720	779	2	0	0	0	3,013	1	1	0	0	0	2,000
Chatham	441	1,118	768	862	749	1	1	1	0	3,503	2	1	0	1	0	3,660
Ludlow	81	208	112	131	147	0	0	1	0	599	0	0	0	0	1	1,626
Northesk	220	422	330	330	430	1	0	0	0	1,577	0	0	0	1	0	3,103
Alnwick	138	288	239	243	257	0	0	0	0	1,027	0	2	0	3	0	2,011
Blissfield	125	182	136	105	122	0	0	0	0	545	0	0	0	0	0	2,333
Blackville	195	415	347	263	330	2	0	0	0	1,357	1	1	0	1	1	3,048
Glenelg	237	393	297	272	289	0	0	0	0	1,351	1	2	0	1	0	3,828
Nelson	253	601	426	362	357	2	0	0	0	1,648	0	1	0	1	1	3,024
KENT:—																
Richibucto	315	582	606	488	511	1	0	0	0	2,088	1	1	2	0	2	4,563
Carleton	220	538	413	840	353	0	0	0	0	1,644	0	1	1	0	3	3,735
Wellington	237	477	202	374	399	0	0	0	0	1,452	0	0	1	0	1	4,829
Dundas	176	281	322	250	309	0	0	1	0	1,163	0	0	0	2	0	3,182
Weldford	192	311	289	224	304	0	1	1	0	1,130	1	1	0	1	1	4,104
Huskisson, (without population).																
Harcourt																
GLOUCESTER:—																
Saumaroy	226	358	434	410	389	0	0	0	0	1,591	0	0	0	2	0	1,775
Caracquet	290	516	564	456	539	0	0	0	0	2,075	0	0	0	3	0	3,256
New Bandon	112	174	190	148	188	0	0	0	0	700	0	0	0	1	0	2,270
Beresford	166	292	324	283	315	0	0	0	0	1,214	0	0	0	2	0	1,558
Bathurst	291	491	476	510	510	0	0	0	0	2,171	1	1	1	1	0	2,822
RISTIGOUCHE:—																
Dalhousie	136	486	233	186	181	1	1	2	2	1,095	0	1	0	0	0	2,168
Addington	121	254	190	173	193	2	1	0	1	814	0	0	0	0	0	832
Durham	85	164	140	108	130	0	0	0	0	536	0	0	0	0	0	1,032
Colborne	76	140	133	109	118	0	0	0	0	540	0	0	0	1	0	1,620
Eldon	8	201	5	5	5	0	0	0	0	216	0	0	0	0	0	27
CHARLOTTE:—																
Saint Andrew's	500	912	924	956	847	13	17	5	5	3,682	1	1	1	1	0	5,309
Saint Stephen's	495	932	815	794	794	0	0	0	0	3,405	3	1	3	0	1	4,226
Saint David	171	405	410	391	403	0	0	0	0	1,609	1	0	1	1	0	4,886
Saint George	363	600	569	631	614	3	0	5	0	2,422	1	1	0	2	1	4,097
Saint Patrick	294	513	537	411	552	0	0	0	0	2,013	1	1	1	1	0	5,206
Saint James	179	327	290	282	256	0	0	0	0	1,155	1	1	0	0	0	4,499
Pennfield	168	285	205	233	260	0	0	0	0	1,043	1	0	0	1	0	2,235
Grand Manan	154	259	273	238	233	0	0	0	0	1,003	1	0	0	0	1	2,671
West Isles	178	226	308	287	304	1	0	2	0	1,126	0	0	0	2	0	1,007
Campo Bello	111	170	187	180	173	0	0	0	0	718	1	0	0	0	0	1,000
Summary:—																
County of York	2,005	3,747	3,294	3,341	3,158	104	116	143	92	13,995	10	2	5	10	2	1 44,818
Carleton	1,917	3,553	3,520	2,979	3,278	22	11	10	8	13,381	3	1	2	4	4	5 49,963
Saint John	2,806	8,993	7,078	9,223	6,896	183	168	281	145	32,957	8	2	5	4	4	5 19,134
King's	2,178	3,856	3,637	3,490	3,307	58	43	48	30	14,464	11	3	6	12	0	69,452
Queen's	1,188	2,215	1,954	1,908	2,061	23	23	25	25	8,232	5	1	1	2	4	43,089
Sunbury	573	1,165	1,094	985	1,001	1	3	5	3	4,260	2	1	1	1	0	3 12,262
Westmorland	2,467	4,486	4,600	4,170	4,360	15	18	14	23	17,686	4	2	11	13	6	90,022
Northumberland	2,037	4,360	3,398	3,288	3,560	11	1	2	0	14,620	4	9	2	2	8	1 25,323
Kent	1,140	2,189	1,732	1,676	1,876	1	1	2	0	7,477	2	3	4	0	9	0 20,413
Gloucester	1,085	2,034	2,003	1,773	1,941	0	0	0	0	7,751	1	1	1	0	0	11,681
Ristigouche	462	1,235	705	581	627	6	2	2	3	3,161	0	3	0	0	1	0 5,579
Charlotte	2,622	4,837	4,578	4,473	4,436	12	13	24	6	18,178	11	5	8	4	2	36,136
Total	20,514	42,470	37,593	37,887	36,501	439	389	549	334	166,162	61	32	44	61	51	21 435,861

REMARKS.—*County of York*—In the estimation of the cleared Land, the Town Plot of Fredericton is not included; there are in the Parish of Douglas three Oat Mills. *County of Carleton*—There is in the Parish of Northampton one Oat Mill not included in the above return. *County of Westmorland*—The Parish of Dorchester has three first-rate Oat Mills. Of the estimated quantity of cleared land, 4,891 acres are dyked marsh. The Parish of Sackville—of the estimated quantity of cleared land 765 acres are dyked marsh. The Parish of Moncton—of the estimated quantity of cleared land, 1,334 acres are dyked marsh. *County of Ristigouche*—No return has been made of the Population of the Lumbering Districts, or of a very large portion of the labouring class in this county, which may be safely estimated at from 1,200 to 1,500 Males above 16 years of age. *County of Charlotte*—Nearly 200 of the Male Population of the parish of West Isles were at sea at the time of taking the census, and are consequently not included in the above return.

Military Defences.—An excellent militia, consisting of a regiment of yeomanry *cavalry*, of 10 complete troops stationed in different counties; 3 separate troops of cavalry; a regiment of artillery, with a lieutenant-colonel, 2 majors, 9 captains, 8 first and 7 second lieutenants and staff; 18 regiments of militia divided into battalions, and including light infantry and rifle corps. The militia commissions comprise 63 field officers, 380 captains, 786 subalterns, 120 staff, 1,030 sergeants, 60 drummers, and 27,200 rank and file.

The militia, by the military act of 17th March, 1825, are liable to be called out three days in each year—one for general muster, and two for company drill. They were only called out one day in 1848. The organization of the militia is complete, and a number of volunteer companies at St. John, Fredericton, and other places, are armed and trained. The sports of the country have made many of the militia excellent marksmen, and, as in Canada, they would be formidable adversaries to an invader.

The annual expenses of the militia are—salary of adjutant-general, £85; quartermaster-general, £150; to each adjutant, £15 (£510); and £7 10s. to each sergeant-major (£250); total, £1,000.

The military posts at New Brunswick are—

Military Posts.	Barracks for—	
	Officers.	Men.
St John	14	632
Fredericton	20	439
St. Andrew's	—	30
Pegele	4	164

The pecuniary allowances, expense for rations, quarters, or other advantages, are provided by the colony. There is a bounty of £5 allowed by the Provincial Legislature for the apprehension of deserters from her majesty's forces, provided the amount do not exceed £100 per annum.

The Judicial Department comprises a Supreme Court, with a chief and three puisne judges; a court of Chancery, one of marriage and divorce, and one for the trial of offences committed at sea—over these three courts the lieutenant-governor presides; a court of vice-admiralty, and one of probate. There are commissioners of bankrupts' estates. The "Barristers' Society" numbers 57 members; the roll of barristers and attorneys in 1849 contained 155 names. In British America both branches of the law are practised by the same individual.

Ecclesiastical Department in 1849.

Denomination.	Number of Clergy.	No. of Churches.	No. of Chapels.	No. of Reading Places.	Church Accommodation.	Generally Attending.	Parsonages.	Glebes.
Church of England in 1847	1 Bishop . . . 1 Archdeacon . . . 33 Rectors . . . 8 Curates . . .	11	17,920	Unknown.	20	. .
Church of Rome in 1846	1 Bishop . . . 24 Priests . . .							
Church of Scotland in 1847	8 Ministers . . . 21 Ministers . . .							
Wesleyan Methodists in 1847	33 Local Preachers . . .							
Baptists in 1846	41 Ministers . . .	27	57	119	11,980	8,980	7	14
		. . .	65	. . .	26,000	22,500
		19,290

There are also about 12 ministers of the Presbyterian church in New Brunswick, and of the Reformed Presbyterian church; and there are 4 Congregational ministers. There is a Church and an Auxiliary Bible Society. The protestant diocese of Fredericton was created in 1845. The clergy of the Established Church derive their principal support from the "Society for the Propagation of the Gospel in Foreign Parts." The livings are from £200 to £300 currency. There are about 90 parishes and 60 churches, capable of holding 20,000 persons. Dr.

Gesner says, that double the number of clergymen of the Established Church could be advantageously employed. The Roman Catholic diocese includes Prince Edward Island. The Roman Catholics are principally the Irish and Acadians; their clergy are supported by subscriptions, fees, pew-rents, and tithes. The Presbyterian church was established by ministers sent from Scotland in 1817; they have churches in different counties, and with large congregations. The Wesleyans are a numerous and respectable body. Their ministers are paid

as highly as those of the Established Church, according to their being married or unmarried, to the number of their children, and to their length of service in the ministry. The Baptists are divided into several sects, but they are generally serious and well-conducted. Their established faith is contained in 17 articles, and they meet annually to adopt regulations for the preservation of harmony. "Camp meetings" are occasionally held in New Brunswick, and on the United States frontier.

EDUCATION is carefully and judiciously extended. The university of King's College, at Fredericton, established in 1828, by Sir Howard Douglas, has for its patron the Queen, and is well supplied with professors in different branches of literature and science. For superior degrees, the terms and exercises correspond with those of the English universities. The religious exercises are those of the Church of England, and candidates for degrees in divinity are required to subscribe to the Thirty-nine Articles of the church. The college is endowed with 6,000 acres of valuable land, near Fredericton, has a grant from the crown of £1,000 sterling per annum, and £1,000 from the Provincial Legislature. Scholarships of £20 and £25 have been founded, and are given to students of merit. The expense of tuition and board is about £35 currency per annum. Candidates for matriculation are required to be acquainted with the Latin and Greek languages, and the rudiments of algebra and geometry. The instruction is devoted to the classics, mathematics, natural philosophy, chemistry, natural history, intellectual philosophy, logic, and the evidences of religion, natural and revealed; moral philosophy, general history, Hebrew, theology, and French. The academical year has four terms; and four years are required for the degree of Bachelor of Arts. There is no distinction in reference to religious profession, age, or otherwise. There is a collegiate school at Fredericton, which educates boys preparatory to matriculation. The Wesleyans and Baptists have each a superior academy for instruction. There are grammar and parish schools in each county: the supervision of the former is vested in a board of trustees, appointed by the lieutenant-governor and council, and the general management of the latter is, by an act of the House of Assembly (10 Vict., ch. 56), vested in the lieutenant-governor and council, as a board of education. Nine

schools is the average number permitted to be established for each parish; but the number may be increased to thirteen, provided the whole number in the county to which the parish belongs does not exceed the established average. The government allowance to teachers in the parish schools is, per annum, £30 first class, £22 second class, and £18 third class. The emoluments of the teachers, exclusive of the government allowance, range from £20 to £100 per annum.

Public Schools in New Brunswick.

Counties.	Gram. Schools.		Parish Schools.					
	Number.	Scholars.	Number.	Teachers.		Scholars.		Total Scholars.
				M.	F.	M.	F.	
York	1	76	50	49	11	944	841	1785
St. John	1	69	48	39	9	1550	960	2510
Charlotte	1	69	69	44	25	1206	926	2132
King's	1	30	64	50	14	1096	835	1931
Queen's	1	15	47	43	4	661	510	1171
Sunbury	1	30	25	17	8	382	331	716
Carleton	1	31	35	30	5	418	338	756
Restigouche	1	38	13	10	3	150	141	291
Gloucester	1	72	24	14	10	324	335	659
Northumberland	2	—	53	46	7	1086	861	1947
Kent	—	—	35	29	6	473	375	848
Westmoreland	—	—	71	56	15	1061	900	1961
Albert	1	42	27	18	5	386	323	709
Total	11	485	571	445	126	9737	7680	17903

The Press.—There are eight printing-offices, whence issue eight newspapers, conducted with ability; but occasionally, as may be supposed, with considerable party acrimony. The *New Brunswick Courier*, and *Royal Gazette*, contain much valuable local and statistical information. All the towns have libraries, more or less extensive. The *New Brunswick Almanack and Register*, prepared under the superintendence of the Fredericton Athenæum, is one of the fullest and most complete publications of the kind in the British empire. Music and drawing are cultivated to a certain degree; and there are occasionally lectures on astronomy, chemistry, elocution, and the belles-lettres. In St. John's, St. Andrew's, and Fredericton, there are public reading-rooms, where all the leading British and foreign newspapers and periodicals are regularly received.

CRIME.—The number of *felons*, in 1848, in prison, was—of *tried*, whites, males, 31; females, 2; blacks, males, 2; females, 1. *Untried*—whites, males, 5; females, 1; blacks, males, 1. *Misdemeanors*—*tried*—whites, males, 32; females, 14; blacks, males, 2; females, 2. *Untried*—whites, males, 4; females,

1; blacks, females, 1. *Debtors*—whites, males, 45; females, 2; blacks, males, 1. The total number of prisoners in confinement at Michaelmas, 1848, was—whites, males, 115; females, 19; blacks, males, 6; females, 4. Greatest number in confinement at any one time in the year—whites, males, 149; females, 27; blacks, males, 3; females, 6. The prisoners are kept at hard labour in and out of gaol. Of the white prisoners, the number who could not read, were—males, 28; females, 1. The number under 18 years of age, were—males, 14; females, 1. There were no deaths in the prisons of New Brunswick during the year. There is a gaol in each county, which is under the jurisdiction of the sheriff and magistrates of the county, who visit the prison from time to time. There is no fixed system of management or discipline.

Public Institutions.—There is an excellent

marine hospital, into which the admissions, during 1847, were—with fever, 223; other diseases and accidents, 236=486. The deaths during the year were 29, of whom 13 were from fever, 6 from inflammation of the lungs, 2 from dysentery, and the remainder from other diseases. 409 patients were discharged cured. The expense of the hospital during the year was £2,116, including £303 for the purchase of land; buildings and mason-work, £536; labour, cartage, &c., £165. There were 10,939 diets during the year, which cost only £301. There is a lazaretto on Sheldrake Island, Miramichi, which costs £600 a-year. There have been, for some time, 9 lepers on the island—4 men, 1 boy, and 4 women.

There is a provincial lunatic asylum, which, in 1847, contained 140 patients, classed as follows:—

Patients.	Age. 10 to 20.	Age. 20 to 30.	Age. 30 to 40.	Age. 40 to 50.	Age. 50 to 60.	Age. 60 to 70.	Age. 70 to 80.	Total.
Males	5	25	23	18	5	0	0	76
Females	6	21	18	14	1	3	1	64
Total	11	46	41	32	6	3	1	140

The Record shows.—

Patients.	Males.	Females.	Total.	Discharged.		Eloped.	Died.	Remaining.
				Cured.	Uncured.			
Old Cases in Asylum 1st January 1847	39	39	78	13	1	2	3	59
Admitted in 1847, and Re-admissions	47	26	73	34	0	1	5	33
Total	86	65	151	47	1	3	8	92

Character of disease on admission—ordinary insanity, 109; epileptic insanity, 7; delirium tremens, 8; imbecility, 4; furious madness, 7; idiotcy, 2; hydrophobia, 1; brain fever, 1; paralysis, 1. Total, 140.

The admissions from the different counties were, St. John's, 77; Charlotte, 21; King's, 14; York, 13; Carleton, 7; Northumberland, 7; Westmoreland, 5; Gloucester, 3; Sunbury, 3; Kent, 1. Total, 151. Expenditure for the year, £1,627. Average annual number of patients, 84; keepers, 12. Average cost per head, weekly, of patients alone, including all expenses, 7.5 per head.

Among the institutions of the city of St. John's is a Chamber of Commerce, a Sailors' Home, Mechanics' Institute, a District Committee of the Society for Promoting Christian Knowledge, a Religious Tract Society, an Orphan Benevolent Society, a Sacred Music

Society, Ladies' Benevolent Society, *Young Ladies' Total Abstinence Society*, and St. John's Auxiliary to the New British and Foreign Temperance Society (on the total abstinence principle).

The gradual increase of lunacy, in New Brunswick, is shown by the admissions into the asylum between 1836 and 1846:—

Years.	Admitted.	In Asylum 1st Jan.	Total.	Remain- ing Dec. 31.
1836	31	—	31	14
1837	40	14	64	21
1838	29	21	50	21
1839	39	21	60	24
1840	48	94	72	40
1841	68	40	108	54
1842	43	24	97	52
1843	47	52	99	58
1844	60	55	116	69
1845	50	69	119	91
1846	62	74	136	78

CHAPTER IV.

REVENUE AND EXPENDITURE, TARIFF OF DUTIES, BANKS AND COINS, COMMERCE, IMPORTS AND EXPORTS, STAPLE PRODUCTS, AGRICULTURE, MANUFACTURES, AND FISHERIES, BANKS, MONIES, PRICES OF COMMODITIES, WAGES OF LABOUR, &c.

REVENUE.—In 1727, the public income of the province was, in round numbers, £742; in 1789, £962; in 1794, £1,569; in 1803, £3,781; in 1814, £25,878; in 1827, £34,000; in 1837, £60,000; and in 1847, £127,000. Estimating the permanent revenue at £120,000, and the present population at 220,000, the taxation is not much more than 10s. per head annually.

Comparative Statement of the Revenue of New Brunswick, and the sources whence derived, in the years 1846 and 1847.

Sources of Revenue.	1846.	1847.
Ordinary revenue	47,774	50,287
Export duty	22,664	16,553
Received from customs	30,961	31,912
Casual revenue	7,600	9,500
Loan fund	8,281	9,571
Supreme court fees	454	792
Auction dues	407	246
Pedlars' licences	45	27
Emigrant duties	2,129	3,250
Light-house ditto	4,817	3,700
Sick and disbanded seamen . .	2,230	1,566
Total (less shillings and pence)	£127,326	127,410

In 1848, there was a considerable diminution in the revenue of the province, owing to commercial embarrassment, and especially to the depression in the timber and deal trade. The debt of the province is about £80,000. The emigrant tax is levied at the rate of 5s. per head, and appropriated to the benefit of all immigrants. The custom duties are levied under the authority of a Revenue Act, passed in New Brunswick, 30th March, 1848, which imposes a tariff of discriminating duties, in favour of British and colonial produce, growth or manufacture, compared with foreign. This tariff was adopted after the "free import" system of England was enforced, and indicates the desire of the colonists to view England as the parent state. In Canada and Nova Scotia no distinction has been made in the duties levied, on British, and on foreign products. [See Canada Tariff, vol. 1, p. 145.]

It will be seen by the following table, that the discriminating duties are as high as 100, 200, and 300 per cent. in favour of England:—

Tariff of Duties in the Province of New Brunswick, under the Revenue Act, passed 30th March, 1848.

Articles subject to Duty.	On British and Colonial produce, growth, or manufacture.	On Foreign produce, growth, or manufacture.
<i>Specific.</i>		
Apples, per bushel	£ s. d. 0 0 6	£ s. d. 0 0 6
Butter, per cwt.	0 4 6	0 9 0
Candles of all kinds, except sperm and wax, per lb.	0 0 1	0 0 1½
Sperm and wax, per lb.	0 0 3	0 0 4
Cattle of all kinds over one year old . .	1 0 0	2 0 0
Cheese, per cwt.	0 3 0	0 6 0
Clocks or clock cases of all kinds, each .	0 5 0	0 15 0
Coffee, per lb.	0 0 1	0 0 1½
Fish of foreign taking or curing, dried or salted, per cwt.	Free.	0 2 6
Pickled, per barrel	Free.	0 5 0
Fruit, dried, per cwt.	0 5 0	0 7 6
Horses, mares, and geldings, each . .	0 0 0	3 0 0
Leather, sole, per lb.	0 0 1½	0 0 2½
Upper leather, per lb.	0 0 1½	0 0 3½
Harness and belt leather, per lb. . .	0 0 1	0 0 2½
Sheep skins, tanned and dressed, per doz.	0 2 6	0 3 0
Calf skins, tanned, per doz.	0 2 6	0 6 0
Malt liquors of every description (not being aqua vitæ, otherwise charged with duty), whether in bottles or otherwise, per gallon	0 0 3	0 0 6
Meats, fresh, per cwt.	0 4 2	0 6 3
" salted and cured, per cwt.	0 2 6	0 5 0
Molasses and treacle, per gallon . . .	0 0 1	0 0 3
Spirits and cordials, viz.:—		
Brandy, per gallon	0 3 0	0 3 0
Rum and other spirits, and cordials: For every gallon of such rum or other spirits or cordials of any strength, under and not exceeding the strength of proof of 26 by the bubble And for every bubble below 26 in number, an additional, per gal. . . .	0 1 0	0 1 3
Lemon syrup, per gal.	0 0 2	0 0 2
Sugar, refined, in loaves, per lb. . . .	0 1 0	0 1 0
" refined, crushed, per cwt.	0 0 1	0 0 2
" of all kinds, except refined and crushed, per cwt.	0 5 0	0 10 0
" of all kinds, except refined and crushed, per cwt.	0 2 6	0 6 0
Tea, per lb.	0 0 2	0 0 2
Tobacco, manufactured, except Snuff and cigars, per lb.	0 0 1	0 0 1
Wines, per gallon	0 3 0	0 3 0
Wheat flour, per barrel	0 1 0	0 2 0
<i>Ad-valorem.</i>		
On the following articles, for every one hundred pounds of the true and real value thereof, videlicet:		
Boots, shoes, and other leather manufactures	4 0 0	30 0 0
Carriages, waggons, sleighs, and other vehicles	4 0 0	30 0 0

Articles subject to Duty.	On British.	On Foreign.
Chairs, and prepared parts of or for chairs; clock wheels, machinery, and materials for clocks; household furniture (except the property of passengers and emigrants, for their own use, and not intended for sale), looking-glasses; oranges and lemons; whale oil (except the return cargoes of vessels fitted out for fishing voyages from ports in this province); wooden wares of all kinds; matches; corn brooms and brushes; hat and hat-bodies	4 0 0	20 0 0
Piano Fortes; snuff and cigars	10 0 0	20 0 0
Cordage	Free.	10 0 0
Bread and biscuit	4 0 0	10 0 0
All other goods, wares, and merchandise, not otherwise charged with duty, and not hereafter declared to be free of duty, for every hundred pounds of the true and real value thereof	4 0 0	15 0 0

Exemptions from Duty.—Anchors; ashes; baggage and apparel not intended for sale; barilla; beans and peas; books, printed; burr stones; canvass; carriages of travellers not intended for sale; chain cables and other chains for ships' use; coal tar; coals; coins, bullion, and diamonds; composition nails and spikes for ship building; corn, wheat, rye, Indian corn, barley, oats, rice, ground and unground, and buckwheat unground, barley meal, rye flour and meal, oatmeal, Indian meal, buckwheat meal, and calavances; cotton wool and cotton warp; copper in sheets, bars, and bolts, for ship building; corn broom brush; dog stones; duck; dye wood; eggs; felt; fishing-craft utensils, instruments, and bait; fruits, fresh roots, and vegetables of all kinds, except apples, oranges, and lemons; furniture, working tools, and implements, the property of emigrants, not intended for sale; gypsum, ground and unground; hemp, flax, and tow; hides, green and salted; iron in bolts, bars, plates, sheets, and pig iron; lines and twines for the fisheries; looking-glass plates; manures of all kinds; mill saws; morocco skins; nets and seines; oakum; oil, blubber, fins, and skins, the produce of creatures living in the sea, the return of vessels fitted out in this province for fishing voyages; oil—seal, cod, porpoise, palm, and rape; ores of all kinds; pitch; plants, shrubs, and trees; poultry of all kinds; printing paper; quicksilver; rags, old rope, and junk; rock salt; rosin; sail cloth of all kinds; salt; seeds of all kinds; sails and rigging saved from vessels wrecked; sheathing paper; ships, ship tackle, and apparel; skins, furs, pelts, or tails, undressed; soap grease; spikes and sheathing nails; steam-engines, boilers, and machinery for mills; stone, unmanufactured; tallow; tar; tin in sheets and blocks; tobacco, unmanufactured; turpentine; varnish of all kinds; wood and lumber of all kinds, except cedar, spruce, pine, and hemlock shingles; wool; zinc.

In addition to the foregoing rates of duty, one per cent. is charged, under the Loan Act, on all manufactured goods, without any exemption, except those of British colonies.

Loan Fund.—This fund has been raised by a duty imposed, in 1843, on British and foreign importations, to provide for the redemption of the debt contracted previous to the year 1841, and which will be liquidated by instalments in fourteen years.

Expenditure.—This is shown in the following statement of disbursements for the past two years. The calculations are in sterling money, and the shillings and pence are excluded in the totals.

Items.	Years.	
	1847.	1848.
Civil list	£12,083	£12,083
Pay, &c., of legislature	7,332	6,576
Collection of revenue, &c.	3,152	5,354
Judicial establishment	2,029	1,987
Provisional contingencies	375	540
College and grammar schools	1,958	1,968
Parish and Madras	10,209	11,868
Printing laws, journals, &c.	1,446	8,823
Great roads	18,541	20,518
Bye-roads, &c.	13,426	11,461
Navigation of rivers	1,187	1,000
Public buildings	873	816
Wharfs and landings	895	575
Couriers and packets	987	1,337
Lunatic asylum	9,464	1,360
Provisional penitentiary	1,291	1,250
Destruction of bears & wolves	187	320
Bounty for erecting oatmills	250	41
Agricultural societies	1,666	5,125
Relief of emigrants	5,098	12,122
Charitable purposes	4,634	2,621
Indians	300	333
Return duties	347	455
Miscellaneous	3,855	2,656
Interest on sums borrowed	4,418	5,106
Light-houses	3,661	3,890
Sick and disbanded seamen	3,145	1,426
" Ordinary "	852	754
Military contingent	104	76
Total	£113,775	£115,353

In 1837, the New Brunswick Legislative Assembly sent two delegates to England to represent that the colonists had not sufficient control over the levying and disbursement of provincial taxes. The crown thereupon relinquished its rights entirely, in consideration of a fixed civil list, of £14,500 currency per an. being guaranteed. Since then, the colonists complain that the British government gave up some of their best timber districts to the United States, under the provisions of the "Ashburton treaty," in 1842, for which deprivation they consider they ought to have received compensation. As the population of the province increases, the amount of the civil list (which is really not large) will be more easily borne by the colonists. Poor-rates are in general moderate throughout the province; county rates are occasionally levied for local purposes, and there is a statute labour for the roads, commuted on a graduated scale of property, trade, or official income. The three days' annual service for the militia,

required of all males between 16 and 45 years of age, is, in the event of non-attendance, compensated by a fine of 10s. for each day's absence.

Banks.—The province possesses several monetary institutions. The Bank of New

Brunswick has a capital of £100,000; Commercial Bank of New Brunswick, capital, £150,000; Central Bank of New Brunswick, capital, £35,000; St. Stephen's Bank, capital, £25,000; Branch of the Bank of British North America, capital, £1,000,000.

Position of the Public Banks.	Central Bank of New Brunswick.	Commercial Bank of New Brunswick.	Bank of New Brunswick.	Charlotte Bank.	St. Stephen's Bank.	Totals.
LIABILITIES :—	£	£	£	£	£	£
Capital stock paid in	35,000	150,000	100,000	—	25,000	310,000
Bills in circulation	42,247	72,279	45,746	9,268	15,906	185,446
Balance due other banks	575	19,928	—	341	3,735	24,579
Cash deposited not bearing interest	26,790	15,727	40,847	24,036	5,350	112,750
Cash deposited bearing interest	482	17,360	—	—	—	17,842
Profits in hand	7,826	—	5,716	1,002	2,855	17,399
Total	112,922	288,174	192,311	34,648	52,847	668,016
RESOURCES :—	£	£	£	£	£	£
Gold, silver, and other coined metals	4,047	12,369	20,590	1,783	4,036	42,825
Bills of other provincial banks	868	8,852	6,383	1,341	177	17,621
Balance due from other banks	3,910	28,181	18,275	31,574	141	82,081
Debts due, including notes, bills of exchange, &c.	102,728	229,975	143,539	—	45,989	522,231
Real estate	1,367	8,795	3,522	—	720	14,404
Total (less shillings and pence)	112,922	288,174	192,311	34,648	52,847	679,162

Coin.—The amount in circulation not ascertained.

Paper money consists of the notes of the banks of New Brunswick, British North America, Central, St. Stephen's, and Charlotte County. The total amount in circulation, in 1848, about £198,000.

Sir W. M. G. Colebrooke, C.B., governor of New Brunswick, in a report to Earl Grey of 8th April, 1848, speaking generally of the North American Colonies, says:—

"It is much to be regretted that a general revision of the monetary system of the colonies should not have been effected by Parliament. The continuance of nominal currencies, having reference to no acknowledged standard, and originating in the English denominations given to Spanish coins no longer current, but which circulated in the colonies on their first settlement, is an anomaly which was corrected in the United States after their separation by establishing a dollar currency, divisible into cents. The establishment of British sterling as the money of account, as a general measure, would be attended with great advantage to the commercial classes, and tend to simplify transactions with the United Kingdom and also with the United States. It may be objectionable to make gold the standard of the colonies, where silver for the most part circulates; and by a slight alteration in the value of the halfpenny to the 1-20th part of a shilling, 1-50th of a half-crown, and 1-100th of a crown-piece, calculations would be as much facilitated as they are in the United States, by the substitution of dollars and cents. The difference between the provincial currency and sterling is 11 1-9th per cent.

The amount of bank paper in circulation in 1845 is returned at £225,000 currency. The amount returned in 1840 and 1841 was £350,000. In 1842, owing to commercial embarrassment and the decline of credit, it fell to £110,000, in 1843 to £72,000, and 1844 the amount was £80,000.

"The banking system in the province is not on a satisfactory footing; and it is to be regretted that the proposal for establishing a provincial bank was not entertained by the Legislature, and that none of the banks now established, afford any accommodation to the agricultural classes. As before observed, farmers, unable to obtain cash credits or other advances, have not only been restricted in extending their operations depending on hired labour, but in remote districts are discouraged from seeking markets for their produce, when they are often reduced to barter."

There are several joint-stock companies—St. John's Water company, capital £20,000; St. John's Gas Light company, capital, £20,000; St. John's Mechanics' Whale Fishing company, capital, £50,000; a Rural Cemetery company, an Electric Telegraph company, a Mining company, Steam Ferry company, St. Andrew and Fredericton Railway company, building societies, &c.

Between 1835 and 1840, joint-stock companies were formed, whose united stocks amounted to £2,000,000. All these have not, however, gone into operation.

The Central Fire Insurance company has a capital paid in of £10,000; and £40,000 secured by bonds of two sureties.

There is a marine insurance company. The amount under-written, during the year 1847, was £585,049; and the premiums, £20,107. Amount written off during the year, as determined, cancelled, and lost, £482,307. Outstanding risk, 6th July, 1847, £102,742. Loss sustained during the year ending 1st July, 1849, £30,774. Capital stock and assets of the company, £56,501. Of this, paid up, £20,000. In the six months, ending January, 1848, the amount under-written was, £315,864. The premiums thereon £11,574. Loss, and probable loss sustained, £11,120.

The Globe Insurance Company of New Brunswick, has a capital stock paid in of £6000; and £24,000 secured by bonds of the stockholders, with sureties. Total capital, £30,000. Risks, for the year ending 31st December, 1847, £448,992. Premiums received for ditto, £15,335. Losses paid during ditto, £18,868.

There is a chamber of commerce at St. John's, composed of the principal merchants and ship-owners of the city. The chamber communicates with the government on subjects connected with the commerce and general improvement of the country.

Commerce.—The trade of New Brunswick has largely increased; in 1831, the imports into St. John's were valued at £577,777 currency; 1835, at £1,040,000; in 1839 at £1,433,474. In 1842, the value of the imports from Great Britain was £217,000; in 1843, £337,000; in 1844, £454,000; in 1845, £617,000; in 1846 (at St. John's and St. Andrew's only), £533,512; in 1847, £583,355; in 1848, £ . . . The last three years

have been periods of depression, owing to the state of the timber trade. In the imports from Great Britain for 1847, at the port of St. John alone, there were 7,265 packages of cottons, woollens, silks, and linen manufactures, haberdashery, &c., valued at £276,548; iron, wrought, 2,678 tons, value £30,602; iron, unwrought, 2,477 tons, value 27,975; hardware, 11,799 cwts., value £38,979; sailcloth, 455,366 yards, value £26,145; cordage and twine, 17,024 cwts., value £37,483; copper, wrought, 2,163 cwts., value £10,935. These items indicate the valuable trade in manufactures which England carries on with the colonies.

The exports from New Brunswick have also increased; they consist principally of timber and fish. In 1847, the quantity of timber exported from St. John's and St. Andrew's was, 152,653 tons, valued at

£188,446; deals, 28,270,084 feet; staves, 225,905 pairs; shingles, 4,131,583; railway sleepers, 483,570; laths, sawn, 4,245,706; masts and spars, 1,584; and various other descriptions of timber. The following are the exports of wood from St. John in 1839 and 1845. In the returns from the outports, the quantity shipped is not specified:—

Description of Timber.	Quantity, 1839.	Value, 1839.	Value, 1845.
Squared timber, tons .	255,647	£277,998	£275,451
Boards, feet	6,222	16,641	26,342
Deals, do.	75,969	189,252	319,650
Staves, thousand . .	1,858	8,318	4,536
Shingles, ditto . . .	4,504	3,346	6,278
Handspikes, number .	2,474	117	—
Oars, ditto	6,715	556	158
Lathwood, cords . .	4,095	4,232	4,342
Sawed Laths, thous. .	129	—	—
Masts and Spars, No. .	3,864	2,407	1,951
Ship-knees, ditto . .	538	109	—
Total	—	£502,976	£638,708

Of fish the exports from St. John in 1847 were—dried, 18,022 quintals; salted, 18,861 barrels; smoked, 11,020 boxes; oil, 3,057 gallons.

In 1847, the shipping entering the port of St. John's was, 2,308 vessels, 347,308 tons; at St. Andrews, 898 vessels, 81,031 tons. The number and tonnage of vessels registered in New Brunswick, in 1844, was—

Ports.	Under 50 tons.		Over 50 tons.	
SAILING VESSELS.—	No.	Tonnage.	No.	Tonnage.
Miramichi	54	1,330	27	8,813
St. Andrew's . . .	137	2,624	56	15,767
St. John's	168	4,978	221	57,762
STEAM VESSELS:—				
St. Andrew's . . .	1	21		915
St. John's	1	37	5	201

The navigation on the river St. John will probably be much extended; for by the 3rd article of the treaty between Great Britain and the United States, signed 9th August, 1842, the navigation of the river was opened to the citizens of the United States in the following terms:—

“Article III.—In order to promote the interests and encourage the industry of all the inhabitants of the countries watered by the river St. John and its tributaries, whether living within the province of New Brunswick, or the state of Maine, it is agreed, that where by the provisions of the present treaty, the river St. John is declared to be the line of boundary, the navigation of the said river shall be free and open to both parties, and shall in no way be obstructed by either; that all the produce of the forest, in logs, lumber, timber, boards, staves, or shingles, or of agriculture, not being manufactured, grown on any of those parts of the state of Maine

watered by the river St. John or by its tributaries, of which fact reasonable evidence shall, if required, be produced, shall have free access into and through the said river and its said tributaries, having their source within the state of Maine, to and from the sea-port at the mouth of the said river St. John's, and to and round the falls of the said river, either by boats, rafts, or other conveyance; that when within the province of New Brunswick, the said produce shall be dealt with as if it were the produce of the said province; that in like manner the inhabitants of the territory of the upper St. John, determined by this treaty to belong to her Britannic majesty, shall have free access to and through the river for their produce, in those parts where the said river runs wholly through the state of Maine:—provided always that this agreement shall give no right to either party to interfere with any regulations not inconsistent with the terms of this treaty, which the governments, respectively, of New Brunswick or of Maine may make respecting the navigation of the said river, where both banks thereof shall belong to the same party."

The shipping built in New Brunswick in 1848 was—at St. John's, 62 vessels, 17,061 tons; at Miramichi, 14 vessels, 2,655 tons; at St. Andrews, 10 vessels, 3,077 tons; total, 86 vessels, tonnage, 22,793. In 1847, there were registered at St. John's 83 new vessels, 38,112 tons; for owners in the United Kingdom, 1 vessel, 613 tons; registered at Miramichi, 3 vessels, 1,636 tons; ditto for owners in the United Kingdom, 12 vessels, 6,563 tons; total, 99 vessels, 46,924 tons.

Relative Value of Saw-Mill Property and Produce, in the different Counties, in 1834.

Counties.	Number of Mills.	Value of Mills, Privileges, &c.	Quantity of Lumber sawed.	Value of Lumber at place of shipment.	Number of Men employed.
		£	Feet.	£	
Saint John	35	67,530	40,450,000	76,125	525
King's	46	21,559	6,605,000	16,512	470
Westmoreland	66	23,182	11,225,000	28,046	412
Kent	29	38,450	8,600,000	21,500	196
Northumberland	17	58,900	24,300,000	60,750	3873
Gloucester	10	19,377	3,650,000	9,250	162
Charlotte	55	80,625	48,687,500	124,343	1696
Queen's	12	35,000	4,230,000	10,575	255
Sunbury	11	22,950	9,700,000	24,250	247
York and Carleton	32	43,150	12,800,000	32,000	320
Grand Totals	314	£410,703	170,247,500	£403,353	8156
In 1836	Number of saw-mills, 320	Value, £420,000	Men employed, 4,200		
" 1840	" " 574	" 740,000	" " 7,400		
" 1845	" " 640	" 900,000	" " 8,400		

The timber trade has greatly encouraged emigration; the lumberer not only explores and opens the country as a pioneer for others, he also, by his laborious pursuit, obtains for himself the means to settle on lands that he has helped to clear. Dr. Geaner thus de-

* The Lancaster Mill Company, with 32 saws now in operation, will cut per annum 3,000,000 feet of lumber (1837). The Grand Falls are also in operation with the same number of saws, and will cut about

At St. Andrew's the new vessels registered in 1847 were 16, 6,448 tons.

Staple Products.—Timber has hitherto furnished the largest available product of the province. For more than a quarter of a century about 150,000 tons of timber have been annually exported. Since the formation of the colony the quantity of timber cut down has probably not been less than five million tons. According to the replies made in 1834 to some queries by Mr. Smith O'Brien, M.P., and the "Limerick Emigrants' Friends Society," it was stated, that in 1833 there were in the province 229 saw mills, valued at £230,000; on the 1st of January, 1836, the number was 320, valued at £420,000, cutting upwards of 170,000,000 feet of lumber; and early in the year, contracts were entered into by the New Brunswick Mill Company, to the extent of £28,750, for the erection of other mills, which, when in operation, are estimated to cut from 100,000,000 to 150,000,000 feet of lumber, &c., in addition to the above. And the Aristook upper and lower mills, Rapid de Femme, Tobique, Lancaster, Grand Falls,* Acadian Company, and numerous other establishments, are in active preparation for similar purposes.

scribes the mode in which this business is conducted:—

"The felling and hewing of the timber for the British market are generally performed by parties of men hired by the timber-merchant or dealer for the purpose. In the autumn they are despatched into the same quantity of lumber annually (1837). The Leprean mills are also in operation, which cut 2,000,000 annually, (1837).

the woods, with a supply of provisions, axes, horses, or oxen, and everything requisite for the enterprise. Their stores are conveyed up the larger streams, in tow-boats drawn by horses, or in canoes paddled by men; and in winter they are transported over the ice. Hay for their teams is procured from the nearest settlements, and is frequently purchased at £6 per ton. The site for operations having been selected by the leader of the party, a camp is erected, and covered with the bark of trees. The floor of the shanty is made of small poles, and a sort of platform is raised for the general bed, which is composed of evergreen boughs or straw. The fire-place is opposite the sleeping-floor; and that part of the smoke that escapes, ascends through a hole in the roof. In this rude dwelling the food is cooked, and the lumbermen rest at night. A hovel is also built for the oxen, and the hay secured against rain. The party is usually divided into three gangs; one cuts down the trees, another hews them, and the third draws the timber to the nearest stream. They begin their work at daylight in the morning, and seldom return to the camp until evening, when they find their supper prepared. During the night, the fire is replenished with wood by the cook and teamster; and it is a common remark among them, that while the head is freezing, the feet are burning. I have passed several nights with these people in the backwoods, and always found them remarkably kind and hospitable. They are ever cheerful and contented; and a more hardy, laborious, and active class of men cannot be found in any part of the world. Formerly, a certain quantity of rum was supplied to each individual; but since the introduction of Temperance Societies, the practice is less common.

"The avocation of the lumberman is not altogether free from danger. Many lives have been lost by the falling of trees, and the business of forking timber is sometimes very hazardous.

"In the mountainous districts, it is necessary that the timber should be conducted over the steep precipices and high banks along the borders of the rivers. Having been collected on the tops of the cliffs, the square blocks are launched endwise, over rollers, either into the water below, or on the ice, which is frequently broken by the concussion. In its descent, the passage of the timber is occasionally arrested by trees or brushwood: the lumberman then descends, and, holding on to the brushes of doubtful foothold, he cuts away the impediments. This mode of launching timber is called 'forking,'—from which may have originated the substitution of the phrase 'forking over,' for the payment of a debt, as expressed by some of the inhabitants.

"By the latter part of April, the melting ice and snow, with heavy rains, swell the streams and produce freshets. The lumbermen commence 'stream-driving.' The timber on the rivulets is now floated downwards to the deep rivers; each log is launched, and, when stranded, it is again rolled into the current—and their manner of urging the enormous pieces of pine over the rapids is alike creditable to their courage and patience. Still pushing the rafts of timber downwards, and moving with the current that daily transports the bark that covers their movable camps—stung by swarms of insects both day and night, these men possess more patience under their hardships and sufferings than those of any other class in the country. Half-a-dozen of them will frequently navigate the stream astride a log of timber, which they paddle along with their legs in the water; and they will force the light skiff or canoe up a perpen-

dicular fall of three feet, where the roaring of the water is truly deafening, and where there is constant danger of being plunged into some whirlpool, or dashed against the rocks. Although they are frequently rendered giddy by the revolving motion of the eddies, they fix the poles upon the bottom, and move away against the foaming torrent, or cross the stream on slippery blocks of pine. Such is the force of habit, that these men view the forest as their home, and the river as their turnpike; constantly exposed to the inclemency of the weather and the water of the rivers, they appear contented, and seem to regret when the labour of the season is ended. In situations where the water is more tranquil, a singular spectacle is sometimes presented: each of the drivers mounts a log or piece of timber, and, with their pikes in hand, the party move along like a floating regiment, until some fall or rapid warns them to re-embark. Not unfrequently, a rapid is blocked up with timber in such quantities, that it refuses to pass. This is called a 'jam.' The clearing away of these jams is the most dangerous part of the stream-drivers' employment, and who are sometimes thrown down a fall or rapid into the boiling pool beneath.

"The quantity of timber in one of these drives is enormous: its progress along the river where there are rocks is therefore slow, especially when the summer is advanced, and the volume of the water consequently diminished. In order to deepen the water, 'wing dams' are sometimes constructed on the sides of the most troublesome rapids. The depth and velocity being thus increased, the floating timber passes along more readily; but these dams greatly impede the passage of canoes in ascending the streams. Like the employment of the sailor, the work of the lumberman is peculiar: he requires much practice and experience; and it may be safely asserted, that should any unfavourable change take place in the home timber trade, thousands of men will be thrown out of employment, who have as little disposition to engage in agriculture as those who have been employed as sailors or fishermen.

"The timber and logs having been collected, are formed into large flat rafts, and floated down to their place of shipment, or to saw-mills, where the logs are manufactured into deals, boards, planks, &c. The lumber-men then receive their pay, which they too often spend in extravagant festivity, until the period arrives when they again depart for the wilderness: yet there are many who take care of their money, purchase land, and finally make good settlers. Timber is collected by farmers, new settlers, and squatters, who also procure great numbers of logs for the saw-mills; but the greatest supplies are brought down by the lumbermen from the interior forests. Mills for the manufacture of timber have greatly multiplied within a few past years. The removal of the exterior parts of the logs, by saws, is favourable to the preservation of the wood, and by it a great saving is effected in the freight. The saws, however, are chiefly applied to spruce, while the pine is shipped in squared logs."

Mr. Perley, in his evidence before the House of Lords, 11th June, 1847, related the following case, as an illustration of the manner in which a woodman may become a farmer:—

"I sent a young man to a first-rate farmer in the country, who wrote to me for an active young man.

The emigrant, an Irishman from the county of Cork, the son of a small farmer in that county. He brought me a letter of introduction, stating that he was of a decent family. I sent him up to a first-rate farmer, who gave him 30s. currency per month, with which he was not well satisfied; that is equal to 25s. sterling. He had his maintenance and washing and lodging in the farmer's house. He proved himself so active and useful, that in the second month his wages were advanced. Before the close of the season, and the setting in of winter, he had learned the use of the axe very well, and was engaged by a lumbering party in the woods at £5 per month. They found him everything in the woods, except clothing. He proved himself so good an axeman, that at the end of the year, when the men came down with the timber, and he was paid off, he brought to me a sum of £30 currency, and wanted to know what he should do with his earnings. I advised him to buy 100 acres of land, which cost him £12 currency; to put the other £18 in the Savings Bank, and hire out another year, and by that time he would be in a position to establish himself comfortably as a farmer."

Ship-building is largely carried on in New Brunswick. In 1782, the total tonnage of St. John's was 250 tons; in 1795, 4,000 tons; in 1824, 16,000 tons; in 1836, 59,663 tons; in 1839, 80,830 tons. At Miramichi and St. Andrew's, vessels are also built. In 1839, there were 26 vessels, of 9,827 tons, built at Miramichi. Vessels were formerly built by contract, at £5 to £7 per ton, and so imperfectly put together, that the New Brunswick ships obtained a bad name. Since 1840, strenuous and successful efforts have been made to improve the class of shipping, and now the New Brunswick ships are said to equal Thames-built vessels.

There are mines and quarries of limestone, freestone, grindstone, granite, coal, and gypsum, in various parts of the pro-

vince; but the operations are of very limited extent. No authentic information has been collected on the subject.

The number and tonnage of vessels built in the province in 1840, were:—

Ports.	No.	Tons.
At St. John's	62	17,961
Miramichi	14	2,666
St. Andrew's	10	3,077
Total number and tonnage	86	32,793

In 1848, the number of saw and grist mills in the several counties of New Brunswick, was—

In Charlotte County.—16 grist and 103 saw-mills; (in this county there is a small extent of railroad made.)

St. John's.—9 grist and 4 saw-mills; 3 iron-foundries; 1 brass foundry; 3 nail manufactories; 6 brick manufactories; and 1 pottery.

Westmoreland.—53 grist and 181 saw-mills.

King's.—43 grist and 68 saw-mills.

Queen's.—19 grist and 28 saw-mills.

Sunbury.—6 grist and 15 saw-mills.

York.—22 grist and 31 saw-mills.

Carleton.—27 grist and 23 saw-mills.

Northumberland.—18 grist and 33 saw-mills; 1 iron foundry.

Gloucester.—18 grist and 7 saw-mills.

Restigouche.—3 grist mills.

Kent.—13 grist and 31 saw-mills.

Agricultural Produce.—As the forest-land becomes cleared, and population augments, the agricultural resources of New Brunswick will be more fully developed. The following tables show the crops, stock, and land cultivated and granted in each county for the year 1847:—

Crops produced in the Province of New Brunswick, for the Year ending December 31, 1847.

Name of the County.	Wheat.	Rye.	Oats.	Barley.	Buck-wheat.	Other Grain.	Potatoes.	Turnips.	Other Roots.	Hay.
	Bushels	Bushels	Bushels	Bushels	Bushels	Bushels	Bushels.	Bushels	Bushels	Tons.
York	14,300	147	103,540	2,192	17,645	1,837	259,248	8,644	873	17,025
Carleton	4,970	2,640	197,000	"	116,200	8,940	271,000	23,400	1,457	16,420
Saint John	563	"	9,448	572	3,234	1,052	91,924	8,124	1,296	8,498
King's	13,770	1,116	96,882	1,628	96,543	423	145,208	13,578	1,857	30,672
Queen's	10,431	2,395	72,134	326	36,576	596	123,431	5,373	1,089	25,434
Sunbury	4,739	1,673	37,513	154	9,541	749	79,135	2,210	847	8,967
Westmoreland & Albert	44,250	940	151,500	2,700	38,900	12,800	252,400	36,450	3,900	34,340
Northumberland . . .	41,562	1,034	114,970	4,366	1,092	994	274,697	13,220	864	8,368
Kent	17,241	1,932	62,847	3,742	3,063	1,427	197,437	1,373	287	8,651
Restigouche	7,486	167	"	"	342	194	78,543	1,843	573	3,524
Gloucester	21,264	768	38,931	7,784	"	1,448	212,372	2,470	1,648	5,684
Charlotte	9,420	"	67,460	6,948	2,180	1,942	93,470	16,540	1,430	16,880
Totals	189,996	12,802	952,225	30,412	325,316	32,402	1,988,865	133,225	16,121	184,463

The prices of agricultural produce in 1848 were—wheat, 6s. 9d.; rye, 4s.; oats, 2s.; barley, 3s. 9d.; buck-wheat, 2s. 8d.; pota-

atoes, 1s. 4d.; turnips, 1s. 6d.; maize, 4s. per bushel. Hay, 40s. per ton.

Stock and Land, cultivated and uncultivated, in the Province of New Brunswick, Year ending Dec. 31, 1847

Name of the County.	STOCK.				LAND.			
	Horses.	Horned Cattle.	Sheep.	Swine	Pasture.	Cropped and in Hay	Granted Land.	Ungranted Land.
					Acres.	Acres.	Acres.	Acres.
York	2,347	9,342	19,832	4,324	23,431	29,437	940,914	1,230,686
Carleton	2,980	11,230	18,430	6,840	28,460	31,350	811,402	4,480,598
Saint John	1,437	5,165	4,708	2,786	16,542	18,146	309,147	105,573
King's	3,116	19,539	27,794	6,978	43,842	51,603	662,752	187,168
Queen's	1,645	10,326	14,922	3,451	28,446	33,473	514,204	477,076
Sunbury	875	4,620	7,840	1,862	6,167	14,210	377,078	405,002
Westmoreland & Albert	6,212	26,540	36,400	7,415	47,500	58,800	811,140	509,680
Northumberland . . .	2,517	11,843	15,134	5,605	8,368	40,248	986,168	1,993,832
Kent	1,450	4,796	9,439	3,460	5,827	19,240	386,398	640,002
Restigouche	1,783	2,150	3,317	1,480	3,652	5,741	156,979	1,109,581
Gloucester	956	4,912	8,124	3,584	6,340	8,230	332,902	704,538
Charlotte	1,325	9,650	14,142	3,384	15,584	20,412	317,245	466,115
Totals	26,643	120,113	180,082	51,169	238,159	330,890	6,606,329	12,309,851

In 1825, major-general Sir Howard Douglas, then governor of New Brunswick, gave a stimulus to the agriculture of the province; assembled the members of the legislature, and other gentlemen, at Fredericton, addressed them in an eloquent speech, and strongly urged extended and careful cultivation of the soil. Agricultural societies were formed, improved breeds of cattle ordered from Great Britain, model ploughs and other rural implements introduced, and a beneficial and lasting impulse was given to husbandry.

The wheat of New Brunswick is of the very best quality: it is much heavier than the American (United States) wheat; weighs 65 pounds to the bushel, or even more. The produce is 15 to 30 bushels an acre. Indian corn is not a certain crop. It requires a light, warm soil, and plenty of manure. The old American rule is to drop 6 grains of corn into each hole:—

One for the cut-worm,
One for the crow,
One for the grub,
And three for to grow.

Oats is a safe crop: the produce is 20 to 40 bushels an acre. In 1844, the potato blight reached New Brunswick from the United States, gradually found its way over the boundary line, and proceeded from W. to E. In 1845, the potatoes suffered as much as in Ireland; but in 1846 the disease disappeared to a great extent, and there was nearly an average crop, of good quality. The produce, on old lands, is from 150 to 400 bushels per acre: 800 bushels may be raised on one acre. Clover is a good crop. White clover is indigenous. Turnip cultivation has been introduced of late years, with great success, for feeding cattle in winter.

The two following cases were submitted in evidence to the House of Lords, 11th June, 1847, in proof of the capability of New Brunswick to receive agricultural settlers. The witness advocated the making of roads, in the first instance, into the wilderness, as a means of opening the country, and of giving temporary employment to the newly-arrived emigrant. He was asked by their lordships:—

“Can you give any account of particular settlements formed in the neighbourhood of those roads?—Two very striking instances of the success attending the formation of new settlements in the wilderness by associations of settlers, having the privilege of making their own roads at a reasonable rate, exist in York County. The Harvey settlement was formed in the forest, on the line of road between Fredericton and St. Andrew's, in 1837, by a party of emigrants, (45 heads of families), from the north of England, who landed in New Brunswick in a very destitute condition. A report upon this settlement was presented to his excellency the lieutenant-governor by the Honourable L. A. Wilmot, the commissioner who formed it, on the 9th February, 1844, accompanied by a statistical return. This report states, that it is shown by the return, that from land where not a tree was felled in July, 1837, there had been taken, during the preceding autumn, 260 tons of hay and straw, and 15,000 bushels of grain, potatoes, and turnips, and that the great success which had attended the labours of these industrious and valuable settlers, afforded an unquestionable proof of what might be done on the millions of wilderness land in New Brunswick. The return shows the number of settlers to be 44, and the value of the improvements to be £4,289 10s. The settlers accompanied the original return with the following observations, written by one of the parties himself:—The climate of New Brunswick agrees well with the constitution of Englishmen; the air is salubrious, and the water as pure and wholesome as any in the world. During the six years of our location but two deaths have occurred, while there have been thirty-nine births without the presence of medical aid. Six years' experience has convinced us, that, notwithstanding the privations to which new settlers are

exposed, diligence and perseverance must ensure success. This English settlement is rather compact along both sides of the road. The lots were laid out with the usual frontage granted in New Brunswick of 40 rods, with sufficient depth to the rear to give them each 200 acres of land. The settlers were conducted into the wilderness by the blazed line, and they commenced making the road. The price paid them by the province for making and gravelling the road enabled them to purchase provisions, and to maintain themselves and their families, until the time when they had some land cleared, and had secured a crop. They cleared the land themselves. The men who formed the Harvey settlement were the contractors themselves; each man got a certain number of rods to make. They all became purchasers of land. Each person cultivated his own plot. All work upon their own land. Each of them earned enough to pay for a plot of land, and to settle upon it. The price at which they obtained the land was 2s. 6d. sterling an acre; one-fourth paid down, and the rest in one, two, and three years, without interest. They had it at the minimum rate. A man put down upon a piece of wilderness with 200 acres of land, should live upon it the second season, after securing a crop, assuming that, in the first season, he begins too late to put in a crop. The better course is to hire themselves out the first season, and at the close of the year, if they do not get employment for the winter, they have some months to work on their own land. During the winter they chop a piece down, erect a log-house, and get upon the land in the spring. If a man is industrious, and successful in getting his land cleared in the spring, and getting in his crop, he may secure enough that season to maintain himself and his family for the succeeding year. Having done that, he is safe.

"You have given an example of the progress of the Harvey settlement, which was an English settlement. Can you give the committee a similar example with respect to any Irish settlement?—I can mention the 'Tectotal Settlement,' which was an Irish settlement, formed by people from Cork and Kerry. It was formed in 1842, under the same commissioner, by a party of destitute emigrants from the south of Ireland. In a report from the commissioner, dated 25th January, 1844, it is thus stated:—'The results of the second effort in which I have been engaged in forming settlements in the wilderness, have afforded me the most unmingled satisfaction. Where but two years ago stood a dense forest there have been gathered, by thirty-five settlers during the past autumn, 7,236 bushels of grain, potatoes, and turnips. The accompanying return shows an estimated value of £1,137 in buildings and clearings; and when there is added to this the market value of the crop, exceeding £800, we have about £2,000 return (exclusive of the making four and-a-quarter miles of road) from a tract of land which, in its wilderness state, would not in the same time have produced a shilling. I cannot now consider the successful occupation of our wild lands by associated bodies of settlers, having the privilege of making their own roads at a reasonable rate, as a doubtful experiment. No antagonist theory can prevail against the practical experience which can now be referred to. Similar management must produce similar results; and I am well persuaded that no other system is so well calculated to promote the improvement of our millions of wilderness acres, and thus to advance the population and commerce of the province.'"

Notwithstanding the defective state of agriculture in the province, the following crops, per acre, have been produced in different parts of New Brunswick:—

Wheat, 40 bushels, some weighing 68 lbs. per bushel; barley, 40; oats, 60; Indian corn, 75; buck wheat, 75; peas, 40; turnips, 1,000; potatoes, 800 bushels; carrots, 30 tons; mangel wurtzel, 30 tons.

In the report of the York (New Brunswick) Agricultural Society, in 1841, it was stated that the following produce was raised on seven and-a-half acres of land, including a garden:—

"Ten tons hay; 76 bushels oats; 280 bushels potatoes; 3 tons straw; 35 bushels carrots; 20 bushels turnips; 15 bushels beets and parsnips, besides an abundant crop of other garden produce. And from the time that clover was fit to cut for soiling, four cows were liberally fed every night during the season, and two horses occasionally in every week."

A settler at Stanley, on the New Brunswick Company's land, in 1845, thus details the agricultural result of his first year's farming:—

"It may be said that we have longer winters, and less productive soil than in the west, but against this we have healthy climate, and a better market, the summer not so oppressive, nor the winter more severe. Of the soil and its produce, you may judge from the following statement of 20 acres, of which I have taken account, showing the produce, the cost of the land, and preparing it:—

Produce.	£	s.	£ s
Oats on 17 acres, 850 bushels at 2s. 6d.	106	5	
Wheat on 3 acres, 72 bushels at 8s.	28	16	
Straw	25	0	
	—	—	160 1
20 acres of land, at 6s.	6	0	
Clearing ditto ready for crop, 78s. per acre	78	0	
Oats for seed, 50 bushels to 17 acres, at 4s. . . .	10	0	
Wheat ditto, 5 bushels to 3 acres, at 10s.	2	10	
Harrowing and sowing at 7s. 6d. per acre	7	10	
Harvesting at 15s. per acre	16	0	
	—	—	120 C
Profit			40 1

"The item for clearing the land in the above, for the first year, takes much from the show of profit, but is a sum that would not afterwards appear."

Another settler states the produce of 25 acres of land:—

"I have at present 100 acres of land, and about 25 cleared, and all paid; cost me £30 currency, equal to £25 English money. I had five years to pay it. I raised off it last summer 300 bushels of potatoes, 100 bushels of turnips, 100 bushels of oats, beside some wheat and buckwheat, and a great quantity of garden vegetables, and two barrels of pork, which, thank God, I can use in my own family, and not be compelled to sell it to pay the rent, tithes, or taxes; so that I am quite comfortable, but very uneasy about my friends at home."

Mr. M'Gregor, M.P., late secretary to the Board of Trade, recorded the following instance of successful agricultural industry in

New Brunswick, which came under his observation :—

"On coming down the south-west branch of the river Miramichi, in the autumn of 1828, where the road from Fredericton and the river St. John join Miramichi, I was astonished," he says, "at the unexpected progress made during so short a period (about four years) in the cultivation of the soil. An American told me that when he planted himself there, seven years before, he was not worth a shilling. He has now (1829) more than 300 acres under cultivation, an immense flock of sheep, horses, several yokes of oxen, milch cows, swine, and poultry, a large dwelling-house, a numerous train of labourers, one or two other houses, a forge with a powerful trip-hammer worked by water-power, fulling mill, grist mill, and two saw mills, all turned by water. Near these he had erected a building for the double purpose of a school and chapel, and which he said was open to all persuasions. He raised large crops, ground his own corn, manufactured the flax he cultivated, and the wool of his sheep into coarse cloths; and sold the provisions which his farm produced. In his barn was a heap containing about 90 bushels of Indian corn, that grew on a spot scarcely an acre, which he pointed out to me. He talked much in praise of the rich interior country."

This individual (Mr. Boies) had (1834) probably the best cultivated and as well a stocked farm as there was in the province. He

raised in some seasons, about 1,000 bushels of wheat; a large quantity of oats, Indian corn, peas and beans, turnips, &c.; cuts 200 tons of hay; keeps 30 or 40 oxen, all reared on his farm, employed in the forest hauling out timber; has an extensive dairy; a pigery in which the hogs are reared, fattened, and cured, agreeable to the most approved and economical methods; and every other concomitant to an extensive farm; also a mill for the manufacture, separately, of flour, oatmeal, barleymeal, Indian corn, meal, and flour; a carding mill, &c.

There is an abundance of land in the province available for settlers. The following statement shows the quantity granted and ungranted in each county, and also the Indian lands. It will be perceived that out of 11,715,291 acres of land *fit for cultivation* not much more than half a million (586,979) acres have yet been cleared. The formation of the St. Andrews and Quebec railway, and branch lines, will tend materially to the opening of the country. A tax on wild lands held unproductively would have a good effect:

Granted and Ungranted Lands of New Brunswick.

County.	Cleared land, in Acres.	Wilderness Land.		Granted and located Land.	Ungranted Land.	Total Contents.	Observation.
		Fit for Agriculture.	Unfit for Agriculture.				
Ristigouche . . .	11,439	941,341	313,780	156,979	1,109,581	1,266,560	Exclusive of that portion of country also claimed by Canada, and containing 2,700,000 acres additional.
Gloucester . . .	17,575	764,899	254,966	332,902	704,538	1,037,440	
Northumberland . .	35,764	2,208,177	736,059	986,168	1,993,832	2,980,000	
Kent . . .	28,218	748,637	249,545	386,398	640,002	1,026,400	
Westmoreland . . .	93,030	589,058	196,352	577,440	301,000	878,440	
Albert . . .	32,110	301,088	100,362	233,700	199,860	433,560	
Saint John . . .	27,134	290,690	96,896	309,147	105,573	414,720	
Charlotte . . .	49,135	550,669	183,556	317,245	466,115	783,360	
King's . . .	92,452	568,101	189,367	662,752	187,168	849,920	
Queen's . . .	57,089	678,144	226,047	514,204	447,076	961,280	
Sunbury . . .	17,262	573,614	191,204	377,078	405,002	782,080	
York . . .	59,818	1,606,337	535,445	970,914	1,230,686	2,201,600	
Carleton . . .	65,953	1,894,536	631,511	530,802	2,061,198	2,592,000	
Grand Totals .	586,979	11,715,291	3,905,090	6,355,729	9,851,631	16,207,360	

Reserved Lands in New Brunswick for the Indians in 1842.

Reserves.	Acres.	Total Acres.	Indians	Total Indians	Reserves.	Acres.	Total Acres.	Indians	Total Indians.
In NORTHUMBERLAND—					RISTIGOUCHE—				
On Little S.W. branch of Miramichi river . .	10,000	33,425	{ 43 }	401	On Eel river . . . . .	..	400	..	12
On Little N.W. branch of Miramichi river . .	12,750		{ 158 }		WESTMORELAND—				
At Burnt Church . . .	1,640		{ 200 }		On Aboushagan river . .	..	250	..	138
" Tabusintac river . .	9,035		{ 0 }		" Memramcook river . .	..	60	..	105
KENT—					SAINT JOHN—				
On Richibucto river . .	4,600	8,100	{ 188 }	281	On Kennebeckasis river . .	..	15	..	158
" Buctouche river . .	3,500		{ 93 }		YORK—				
On Pokemouche river . .	2,600	3,600	{ 75 }	102	At Indian Village—		200	..	179
" Nepisiquit river . .	1,000		{ 27 }		CARLETON—				
					At Meductic river . . .	16,000	200	29	
					" Tobique river . . .	700	16,700	123	
					" Madawaska river . .			26	

Total Acres in the Province, 62,950 Total Indians, ditto, 1,376

Land is now sold in New Brunswick by auction, under the Civil List Act, at 8s. currency per acre, as the minimum upset price. A party desiring a lot of land, applies by petition for the lot that he is desirous of obtaining. If unsurveyed, an order is sent to him for a survey, of which he bears the expense. On the return of the survey, it is advertised one month to be sold in the county where the land lies. If surveyed, upon an application being made it is at once advertised to be sold at the monthly sale. In the one case, the party advances the expense of the survey; and in the other, an established price of 3d. per acre is added to the minimum price of land. The party attends at the sale, and if he purchases, and pays down the money, he obtains a discount of 20 per cent. for prompt payment. If he does not pay for the land, he pays one-fourth, and enters into a bond to the crown for the remaining three-fourths, payable in one, two, and three years, without interest, and receives a location ticket. The money is transmitted by the local deputy to the receiver-general of the province, and eventually finds its way into the general revenues of the country.

Many settlers who arrived a few years ago in New Brunswick, without a shilling, are now the owners of fine freeholds, surrounded with abundance, in a healthy climate, and under the protection of laws of their own making.

The area of New Brunswick is estimated, in round numbers, at nearly 17,000,000 acres; of these, 5,000,000 are said to be granted; 2,000,000 are deducted for water and waste; and the remaining 10,000,000, fit for settlement and cultivation, are in a state of wilderness, ungranted, and at the disposal of government.

According to the New Brunswick Blue Book for 1848, the land granted and sold in New Brunswick, in 1848, *under* 100 acres, was, 6,639 in 117 grants; above 100, and not exceeding 500 acres, 92,737 in 282 grants; exceeding 500 acres, 15,015. Total number of acres granted and sold during the year, 114,391, of which 46,228 acres were purchased, and 68,163 granted. The average price, per acre, was 2s. 9d.

The number of acres granted in the colony up to 1848, has been 3,915,498; and the number sold, 1,720,296. There remain still to be granted, 13,511,154 acres of land.

From a recent Report of the surveyor-general of New Brunswick upon the present

state of crown lands, it appears that the whole quantity of land sold during the year 1848, amounted to 26,761½ acres, of which 14,777 acres have been paid for in full, and upon which £1789 19s. 3d. have been received; leaving 11,984½ acres, which have been sold under the instalment system, and upon which £473 3s. 4d. have been received.

The timber licences for the past year cover, it is stated, an area of 2,157 square miles, at an average rate of 16s. 8½d. per mile, producing £1,992 8s. The highest rate paid for any one lot was £20 1s. per square mile, being a licence for 9 square miles, situate on the left bank of the river St. Croix, about 25 miles above St. Stephen. The quantity of land under licence in 1847 was 5,360 square miles, which produced the sum of £3,585 7s. 9d., the highest price paid per square mile being £5, the whole quantity averaging only 10s. 5½d. per square mile.

The immigration into New Brunswick, during the year 1848, amounted to only 4,020 persons, being a decrease, as compared with 1847, of 11,249, and as compared with 1846, of 5,745 persons.

The Blue Book for 1848, contains the following:—

Prices of Provisions.—Wheaten flour, per barrel of 196lbs., £1 9s. 3d.; wheat, per imperial bushel, 5s. 5d.; wheaten bread, per lb., 2d.; horned cattle, £7 10s.; horses, each, £25; sheep, per score, £13 10s.; swine, each, £2 10s.; milk, per quart, 3½d.; butter, 9d.; cheese, 7d.; beef, 3d.; mutton, or pork, 4d.; rice, 3d.; coffee, 10½d.; tea, 3s. 7d.; sugar, per lb., 8d.; salt, per bushel, 1s. 4d.; wine, 10s.; brandy, 9s.; beer, per gallon, 1s. 9½d.; tobacco, per lb., 1s. 6d.

Wages for Labour.—Domestic, 30s. to 60s.; predial, 30s. to 45s., with board and lodging, per month; trades, 4s. 6d. to 8s. per day.

Fisheries.—New Brunswick possesses a coast line of 500 miles in extent, admirably adapted by its deep bays, coves, and inlets, for piscatory pursuits.

The colonists complain that they are not protected from the depredations of the Americans, who, contrary to treaty, and to national rights, fish within three miles of the land, and carry off their prey, despite of cruisers or coast guard. Dr. Gesner says, the fisheries of New Brunswick, if duly protected, and pursued with energy, would form one of the principal sources of her

wealth and prosperity. The coasts, indented by numerous harbours, bays, and rivers, afford every facility for shore and deep-sea-fishing; and although the practices of the Americans have annually reduced the numbers of the finny tribes, they are still sufficiently numerous to render the employment, under proper management, profitable. But, from causes already adverted to, the demand for timber and a scanty population, the fisheries are not pursued with energy, and the fishermen lack the stimulus of the bounties given to the Americans, with whom they are unable to maintain a competition.

The whole number of fishing vessels belonging to the ports and harbours of the Bay of Fundy side of the province, in 1840, was only 65. Their burthens were from 10 to 30 tons each. The present number, including 20 belonging to Grand Manan, will not exceed 70, exclusive of shore-fishing-boats. That island alone, with a proper population, could employ advantageously 100, and the whole coast 600. The number of fishing vessels belonging to the United States, and fishing in the same waters, is as 10 to 1. The fishermen of the province, with few exceptions, are far less persevering and industrious than the Americans, or even the people of Nova Scotia.

The larger vessels fish for cod on the banks. The shore-fishing is carried on in boats; but they are often very imperfectly supplied with fishing-tackle, and the catch is limited. There is an annual decrease in the number of codfish along the shores, while the haddock are quite as plentiful as they were in former years—a circumstance arising from the fact that the “garbage” thrown into the sea is more destructive to codfish than to haddock. Halibut, hake, and other kinds of fish, are taken by the baited codfish hook; pollock are trailed for in swift water. Herring are taken in nets, but the greatest quantities are caught in “wares.” These are circular enclosures of strong stakes, driven into the beaches near low-water mark, and interwoven with brush-wood. At high-water they are covered by the sea. When the tide recedes, the fish are enclosed in the ware, and left dry. The enclosure is sometimes made with strong nets. Sweeps are also made by large seines. It frequently happens that a much larger quantity of herring are taken in a single tide than can be secured by the fishermen, or perhaps more than their stock will cure. In such instances, great quantities of dead

fish are washed away, and which, with the offal thrown into the water, are no doubt a great injury to the fisheries; yet little attention is given to this abuse of one of the best temporal gifts of Providence. Five hundred and even one thousand barrels of herring are sometimes taken in one of these wares in a single night-tide. Dr. Gesner states, that he has never known an instance on the shores of the Bay of Fundy, where the proprietors of one of these wooden cages were prepared to secure a large catch, or “haul,” as it is frequently called.

These “wares,” erected in the commencement of the fishing season in almost all the bays, harbours, and creeks, are frequently leased to the Americans, who catch, cure, and smoke the fish upon the shores by the consent of the inhabitants, and in direct violation of the Treaty of 1783, and the Convention of 1818. In Passamaquoddy Bay, they fish for cod within a quarter of a mile from the British islands. The advantages of the people are thus sacrificed, often for small supplies of American goods, which are called for by their pressing necessities, the offspring of their idleness, and the relinquishment of their rights. That the fisheries are capable of supporting an extensive trade, and of affording ample remuneration to individual exertion, is certain, from the success that always attends the labours of those who pursue them with activity and energy. In 1839 (which was an unfavourable season for fishing), William Gubtail purchased for his son a boat of 11 tons burthen, for which he paid £100. With this small vessel, the son, with four men whom he had hired, not only cleared the expenses and purchase-money of the vessel, &c., but supported the whole of his father’s family during the whole of the winter. Between the months of May and October of 1840, he made three trips to the deep-sea-fishing, and caught 250 quintals of codfish. Twice he went to the herring fishing, and landed 170 barrels. He also made a third voyage for herrings. Thus, in less than six months, he cleared double the value of his vessel, paid his expenses, and supported his family.

Many of the inhabitants of the coast and islands engage in the different employments of agriculture, fishing, and lumbering; but as might be expected, they are unsuccessful in each of those branches of labour. They plant a few potatoes, and fish in boats during the summer. In winter they embark for the forest, shoot, or remain idle. Many

who take large supplies of fish during their season, are compelled to purchase them from the trader during the cold months at a high price. These observations will not, however, apply to the whole fishing population, of whom exceptions are to be made for a few individuals who live comfortably, and have, by their industry, gained an honest independence. The present degraded and unprofitable state of the fisheries has resulted from the violations of the convention by the American fishermen, who obtain bounties on fish taken and cured upon British shores, and the indifference of the coast settlers, who remain contented with a precarious subsistence, the result of idleness, rather than earn a comfortable competency. As natural consequences, poverty, and sometimes absolute misery, is too often seen among them, and the resources of both the sea and the land are unproductive in their hands.

Mackerel may be taken in the Bay of Fundy from the 1st of May to the middle of October. They are taken by hooks, or on jigs; nets are seldom employed. Mackerel fishing is not followed with much enterprise, and is therefore seldom profitable. The principal shad fisheries are those of the St. John and Peticodiac. Salmon are taken in the small bays and large rivers in nets, or speared during the dark hours of the night. Shad and gaspereau are caught in nets. A fish called menhaden, which resembles a small shad, although plentiful, is not deemed profitable. Porpoises are shot by the Indians during the summer for their oil. Lobsters and other shellfish are abundant. Whales are seen upon the coast at all seasons, but no attempts are made to capture them.

The Mechanics' Whale-fishing Company, and C. C. Stewart, Esq., of St. John, are engaged in the whale fishery of the Pacific Ocean. The exports of whale oil from the province average about 100,000 gallons, and of sperm oil 50,000 gallons per annum.

The fisheries on the N.E., or Gulf of St. Lawrence coast of New Brunswick are not in a more prosperous state than those of the Bay of Fundy, except at Caraquette, which exports from 8,000 to 10,000 quintals of dry fish annually. The encroachments and contraband trade of the American fishermen are even more daring in the Gulf than along the Atlantic coast.

Cod-fish are still abundant on many of the banks and shoals, and great facilities

are offered for shore-fishing. Haddock, pollock, and halibut are very numerous at certain seasons: with these there are immense shoals of herring. Caplin are sometimes carted on the fields for manure. Salmon frequent all the rivers; but since the erection of saw-mills their numbers have decreased. Gaspereau and smelts are taken in the principal streams; and sea trout enter the lagoons.

Mackerel may be taken in the Gulf of St. Lawrence and Bay Chaleurs from May to October, and large catches are made by the American fishermen. In summer the mackerel are lean, but in the autumn they are remarkably fat and of large size. Lobsters, clams, and other shellfish are plentiful. Oysters are shipped from different parts of the shore to Quebec, Halifax, St. John, and other places. In the early settlement of the country, walrus were taken, and they are still occasionally seen. There are two varieties of seals. Whales pursue the fish into the Gulf during the summer, but no attempts are made to capture them. From the rapid increase of population, it would naturally result that the exports of fish would be enlarged; yet, from causes already adverted to, the fisheries advance but slowly, and unless they are protected by the government, they will be altogether in the hands of the French and Americans. These inexhaustible maritime resources are neglected, and a general apathy prevails towards the improvement of those blessings Providence has so abundantly dispensed in the waters of the coast. The foregoing remarks are almost entirely derived from the personal observations of Dr. Gesner, who expresses himself strongly against the "encroachments of the Americans."

The exportation of the produce of the fisheries of New Brunswick in 1830 was, of—

Dried fish	27,825 crots.
Pickled fish	21,177 barrels.
" " " " "	2,783 kegs.
Smoked fish.	4,952 boxes.
" " " " "	5,350 number.
Fish oil " " " " "	12,302 gallons.*
1834.	
Dry cod, 26,559 quintals	£15,188
Wet cod, 693 barrels	583
Herrings, 3,653 boxes, 365 barrels	709
Mackerel, 3,014 barrels	2,564
Salmon, 869 barrels	1,787
Other sorts	5,564
Train oil	9,577

Total £35,972

* Colonial System, by Henry Bliss, Esq., p. 68. London, 1833.

1835.	Value.
Fish, dried	£12,894
" pickled	21,269
" smoked	1,944
Oil, cod liver	849
" seal	1,088
" whale	10,988

Total £49,032*

1839.	Value.
Fish dried, 23,594 quintals	£16,227
" pickled { 16,656 barrels	} 19,812
" { 6,242 kits	
" smoked, 14,365 boxes	6,854
Oil, whale, 78,327 gallons	7,720
" sperm, 15,877 "	3,969
" cod, 12,827 "	1,727
Whalebone, 236 cwt.	1,323

Total £57,632†

1844.	
Pickled salmon	6,479 barrels, 5419 kits.
Smoked "	406 boxes.
Mackerel	24 barrels.
Dried fish	12,405 quintals.
Alewives & shads, salted	16,346 barrels.
Codfish, pickled	214 barrels.
Herring, salted	1,754 barrels.
" smoked	7,308 boxes.
Seal oil	240 gallons.
Cod oil	5,774 "

The above return does not include the Port of St. Andrew's and its outbays.

1845.	Value.
Fish, dried, 8,842 quintals	£5,526
" salted 17,923 barrels	13,444
" smoked, 10,058 boxes	2,614
" oil, 71 barrels	213
Total	£21,697

In 1847, the exports of fish from the port of St. John were, dried, 13,022 quintals, value £7,374; salted, 18,861 barrels, value £15,078; smoked, 11,020 boxes, value £1,136; oil, 3,507 gallons, value £318. From St. Andrew's, in the same year, the fish exported was valued at £5,379.

The legislature of the province have recently offered a small tonnage bounty on fishing-vessels; but the whole sum granted for that object was too small to have any beneficial effect upon fishing industry, which will be observed to be on the decline.

Property.—By a statement made in 1833, in New Brunswick, the value of property in the province was stated to be—city, seaport,

and inland towns, villages, &c.; agricultural produce, implements, and live stock, £3,000,000. Marine and inland navigation, £575,000. Saw, grist, and fulling-mills, £425,000. Total, £4,000,000. This amount must now be largely increased. There is a great spirit of public improvement in the province. A railroad is in progress of construction from St. Andrew's to Fredericton; to be continued, if the funds can be obtained, to Quebec; and New Brunswick may not only be considered one of the most eligible colonies of the British empire for the location of emigrants, but also one of the most thriving and loyal portions of the dominions of our gracious sovereign.

The recent Lieutenant-governor of New Brunswick, Sir W. M. G. Colebrooke, who has had considerable experience in the administration of colonial government, and received the high commendation of successive Secretaries of State for the Colonies, paid the following tribute to New Brunswick, in a despatch to Earl Grey, dated St. John's, New Brunswick, 8th April, 1848, when transmitting the annual report on the Blue Book for the year:—

"At the close of an administration of seven years, it is due to this province to bear my testimony to the value of it, as one of the most important possessions of the crown. The spirit with which its hardy and persevering inhabitants have, in sixty years, triumphed over the difficulties opposed to them in the settlement of such a country, and accumulated so large an amount of agricultural, maritime, and commercial wealth, is an earnest of the success which will attend their future labours, aided by the co-operation of British enterprise and capital. In the present advanced state of the arts, and the recent triumphs of skill and science, which have contributed so largely to unite the families of mankind, and to diffuse to the remotest quarters the blessings of civilization and improvement, the progress of this fine province cannot fail to be accelerated, and its connection with the United Kingdom strengthened and cemented, a result which will assuredly be productive of great reciprocal benefits."

* Colonial tables, Murray, vol. ii. p. 260.

† In the custom-house returns of the outports of New Brunswick, the articles exported in 1839 are

not specified; the table therefore only refers to the exports of the Port of St. John for that year.

BOOK IV.—PRINCE EDWARD ISLAND.

CHAPTER I.

GEOGRAPHICAL POSITION, AREA, AND HISTORY.

PRINCE Edward Island (formerly called St. John's) is situated in a recess or bay in the Gulf of St. Lawrence, and lies between $45^{\circ} 50'$ and $47^{\circ} 7'$ N. lat., and between 62° and $64^{\circ} 27'$ W. long. It is separated on the S. from Nova Scotia, and on the E. from Cape Breton, by the Straits of Northumberland. The nearest points of Prince Edward Island to the neighbouring provinces are, West Cape, which is 11 miles from Richibuctoo in New Brunswick; Cape Traverse, which is 9 miles from Cape Tormentine in Nova Scotia; and East Cape, which is 27 miles from Cape Breton Island. Its exceedingly irregular outline somewhat resembles a crescent in its general appearance, the concave side being towards the gulf, into which its boundary capes project. A line drawn through the centre of the island would measure about 135 miles; its extreme breadth is 34 miles; and its area is estimated at 2,134 square miles. Who first discovered it does not appear to be clearly established. Robertson, Bouchette, and M'Gregor, speak of it as the first land seen by Cabot after his discovery of Newfoundland in 1497, and suppose it to have been afterwards re-discovered by Verazani; but Murray remarks that the former conclusion seems wholly inconsistent with Hakluyt's brief narrative, and that the latter is not justified by Verazani's own account of his voyage. Be this as it may, it is mentioned by Champlain under the name of St. John, and its situation and extent are accurately described. It was included by the French in the vast territory called New France, and in 1663 was leased or granted, together with the Magdalen, Bird, and Brion Islands, to the Sieur Doublet, a captain in the French navy, to be held as a feudal tenure, under a fishing company established at the island of Miscou. Little progress, except the establishment of a few fishing stations, was made, until after the treaty of Utrecht in 1715, when many French families

removed there from Acadia, and by their account of its fertility allured settlers from Cape Breton; but in this they were discouraged by the French government, who were desirous of making the latter place the centre of their power in America. In 1745 it was captured by the New England forces, but subsequently restored by the treaty of Aix la Chapelle. In 1758 it was re-taken, and permanently annexed to Britain; the number of inhabitants at this period is stated by Haliburton as 4,100. The island was well stocked with horned cattle; a considerable portion of it had been brought under cultivation, and some of the farmers raised annually 1,200 bushels of corn for the Quebec market. For the two preceding years Prince Edward had been the resort of the Mic-Mac Indians, who, assisted by the French, had made many sudden incursions into Nova Scotia, and committed fearful barbarities on the English colonists. When Lord Rollo took possession of the French governor's house, he there found several English scalps hung up as trophies. In consequence of the determined hostility manifested by the Acadians of Prince Edward Island, they were included in the order for the removal of their countrymen from Nova Scotia, and a large number were shipped off to the neighbouring continent, and to the southern colonies. Some were sent to France, where they were but ill received, and upbraided for the systematic aggression which had so materially conduced to undermine the dominion of France in North America. In 1763, the island was confirmed to Britain, and was included in the general survey of the British empire in America in 1764, which the first American war put a stop to on the continent. The survey of the island being completed in 1766, various schemes for its cultivation and settlement were proposed: amongst others, the Earl of Egmont, then first Lord of the Admiralty, proposed settling it on a feudal plan, his lordship to preside as lord para-

mount, with a certain number of baronies to be held from him, each baron to erect a castle or stronghold; maintain a certain number of men-at-arms; and, with their under-tenants, to perform suit and service, according to the custom of the ancient feudal tenures of Europe. This strange scheme was rejected as impracticable, but another almost as extraordinary was adopted in its stead. It was resolved to grant the whole island to individuals considered to have claims upon the government (principally officers of the army and navy, who had served during the war), on certain conditions prescribed by the then Board of Trade and Plantations. The number of applications being very great, it was arranged that the grants should be drawn by way of lottery.

The land was divided into townships, (each containing about 20,000 acres), some tickets being a prize of a whole township, others of half, and others of a third. By the conditions annexed, the holders of 26 of the townships were to pay six shillings per annum for each 100 acres; the holders of 29 other townships, four shillings per annum for the same quantity; and the holders of 11 other townships, two shillings per annum; all being equally bound to settle their land in the proportion of one settler to each 200 acres, within 10 years from the date of their grants, which, in the event of their failing to do, were to be declared void. Prince Edward Island being then included under the same government as Nova Scotia, it was necessary for the governor to pass grants of the townships to the holders of the tickets; the *mandamus* under the king's sign manual commanding him to do so, bears date August, 1767; and the whole island passed from the crown in a single day, excepting only the small reservations for three intended county towns and two townships, which had been previously partly occupied, with the permission of government, by a fishing company. The result was anything but satisfactory. Mr. John Stewart, to whom I am indebted for much valuable information on the subject, says, that many of the holders of the tickets had never any intention of expending either their time or their money in settling the island, and had used their interest only for the sake of obtaining a saleable commodity. The grants were, therefore, very soon brought into the market: some of them at first fetched £1,000 each; but as the supply

quickly exceeded the demand, the price diminished to one-half, the greater number sold being purchased by a few individuals on speculation.

With the idea of promoting the settlement of the island, a large majority of the proprietors petitioned the king that the colony should be erected into a separate government from Nova Scotia; and, in order to defray the expense of this alteration, they offered to commence paying the one-half of their quit rents on May, 1769, although, by the terms of settlement, they were only to become payable on Michaelmas day, five years after the date of the grants, while the payment of the other half was to have been postponed for 20 years. Their proposal was acceded to; and, in 1770, a governor (Mr. Paterson) and other officers arrived. At this time there were not more than 150 families and five proprietors on the island. After ten years little was found to have been accomplished: a few enterprising and conscientious persons acted up to the spirit of their engagement, among whom was Sir James Montgomery, then Lord Chief Baron of the Scotch Court of Exchequer; but the greater number shamefully neglected the duties they had voluntarily undertaken. Had all the proprietors acted together, a fine and thriving settlement would, in all probability, have been speedily established; but, as it happened, the whole burthen was thrown upon a small number, who were quite unable to sustain the load so unjustly imposed on them, notwithstanding the vigorous efforts they made to do so. Tracadie was settled by Captain Macdonald, with 300 Highlanders, and the governor induced many exiled and other Acadians to establish themselves in the island. In some instances, poor settlers were landed in different townships, far from any other inhabitants, without proper provision being made for their immediate wants. Many, therefore, abandoned the place in disgust, and spread unfavourable reports of the colony, by which its settlement was greatly retarded. Another obstacle is said to have arisen from the proprietors being unable to grant that soccage tenure under the crown which is esteemed the most secure. The colony progressed, however, though but slowly; and as at the time of its being erected into a separate government, the representative of the sovereign had been authorized to summon a general assembly whenever he should deem the island sufficiently settled, Governor Paterson, in 1773,

called the first meeting of the Provincial Legislature.

In November, 1775, two armed American cruisers, taking advantage of the defenceless state of the island, landed at Charlotte town, plundered it, and carried off the acting governor, a member of the council, and the surveyor-general; but on the commanders proceeding to the American head-quarters, they were rebuked by general Washington, told, they had "done those things which they ought not to have done, and left undone what it was their duty to have done," and dismissed from their command. The prisoners were instantly set free, with many courteous expressions of regret for their sufferings, and the plundered property was entirely restored.

It is a pleasing duty to record an act, so perfectly in unison with the noble character of Washington.

In 1776, it being found that the few proprietors who paid their quit-rents did not contribute a sufficient sum to defray the expenses of the government, and the governor being unwilling to proceed against the defaulters, who were generally persons of rank and influence in England, an application was made to parliament for an annual grant to defray the civil expenditure, which application was complied with.

Both governor Paterson, and general Fanning in 1789, are accused of having greatly impeded the cultivation of the land, by endeavouring to monopolize it, to the detriment of the settlers with whom they were constantly at variance. The late duke of Kent, then commander-in-chief of the North American colonies (where, at two different periods, he resided ten years) paid much attention to the island; organized the formation of some provincial troops, cavalry and infantry, and the erection of batteries for the better protection of Charlotte town; the result of these precautions, was the preservation of the colony, during the war, from any molestation. It was at this period that the name of the island having been found inconvenient, from being the same as those of the chief towns in New Brunswick and Newfoundland, it was changed from St. John to Prince Edward, as a mark of grateful attachment to one who well deserved it. In August, 1800, the duke sailed for England, to the sincere regret of the North American colonists, in whose prosperity he had shown himself warmly interested. In 1801, the arrears of quit-rents amounted to £59,162,

being, in many instances, considerably more than the townships would have realised if put up by auction. Government therefore determined to accept a moderate composition which should fall lightest on those who had made the most efforts to settle their land. The townships, whose proprietors were in arrears for quit-rent, were accordingly divided into five classes: 1st. Those which had the full number of people required by the terms of the original grants, were only to pay four years' quit-rent, in lieu of all arrears from 1769 to 1801. 2nd. Those with half the population were to pay five years' quit-rent, in lieu of all arrears. 3rd. Those with from a quarter to half the stipulated number, nine years' quit-rent. 4th. Those with less than a quarter, twelve years' quit-rent; and 5th. The owners of those which were wholly waste and uninhabited, were called on to pay fifteen years' quit-rent *i. e.*, less than half the amount owed by them.

The liberal terms of this composition, by freeing the land from heavy claims, had an almost instantaneous effect on the prosperity of the island, which made rapid strides in population and social comfort. Some proprietors, nevertheless, did not avail themselves of this commutation, and waited for easier terms; it became, therefore, necessary to proceed against them, and in 1804 judgment was obtained by the receiver-general of the quit-rents against ten townships, five half-ditto and one-third ditto, which were escheated to the crown for non-payment of the quit-rents. It is much to be regretted that the rents had not been annually exacted, instead of being allowed to accumulate for so long a period, as the holders of the land would probably have then endeavoured to improve the culture of the land, instead of suffering it to remain a useless waste. In 1803, the Earl of Selkirk took over about 800 Highlanders, and by his strenuous exertions, enabled them to attain a very prosperous condition; with the friends who have since joined them, their number now amounts to above 4,000. Governor Desbarres succeeded Fanning, who was followed by Colonel D. Smith in 1813; the latter was recalled in 1823 for tyrannical conduct, which had caused much agitation in the colony. Lieutenant-colonel Ready was appointed in his stead in 1823. Colonel Young received the appointment in 1831, and was succeeded by Sir John Harvey in 1836. Sir John was removed to New Brunswick in 1837, and his place supplied by Sir Charles Fitzroy until

1841. Sir H. V. Huntly was the next lieutenant-governor, and was succeeded by the present lieutenant-governor, Sir Donald Campbell, in 1847.

The colonists have been endeavouring to establish a court of escheats to confiscate the lands of absent proprietors who have not complied with the terms of their grants, so

that large and fertile tracts might be opened for agricultural industry. Her majesty's government have not agreed to this proposition, but have sanctioned the imposition of a tax upon lands so situated, which has had the effect of stimulating some of the proprietors to settle their grants; and will increase the revenue of the colony.

CHAPTER II.

PHYSICAL ASPECT—TOPOGRAPHY, GEOLOGY, AND CLIMATE.

THE general appearance of Prince Edward Island is extremely pleasing, though it has nothing of the romantic boldness which characterize the northern shores of the Gulf. The surface, like that of New Brunswick, gently undulates, without any absolutely flat country, but no where reaches the elevation of mountains, the principal high lands being a chain of hills traversing the island nearly north to south, from De Sable to Grenville Bay.

The whole island was once covered with forests of beech, birch, maple, poplars, spruce, fir, hemlock, larch, and cedar, and although the labours of the lumbermen, the progress of cultivation, and many destructive fires, have greatly thinned their rich luxuriance; yet still they spring up spontaneously and adorn the land, which is clothed in verdure to the very edge of the water. According to Dr. Gesner, peat bogs are very numerous, although few of them are of any great extent. The largest and most valuable deposit is on the S. side of Cascumpec harbour. It contains a buried forest, and, as the quality of the peat is very superior, will, in course of time, be valuable for fuel.

The constant action of the strong tidal waters of the Gulf of St. Lawrence, has caused the island to be indented, and intersected by bays, creeks, and inlets, which are so numerous and extensive, that scarce any part of the territory is more than eight miles distant from tide water. Of the numerous harbours the principal is that on which the capital, Charlotte town, is built, situate on the S.E. side of the island, at the bottom of Hillsborough Bay, and at the confluence of the three rivers—Hillsborough,

York, and Elliott. The haven is one of the most secure in the Gulf of St. Lawrence, though not more than half a mile wide at the entrance: it has several batteries protecting it, and if occasion required, could be placed in a situation to defy attack from seaward.

The land on which the town is built rises gradually to a moderate height above the sea, and has a maritime communication, by means of the three rivers before-mentioned, with a considerable portion of the island. The Hillsborough river (or rather an inlet of the ocean) flows past the town to the eastward, with a depth of eight fathoms, so that the largest ships may anchor close to the capital, and vessels of 200 tons go up the Hillsborough river, 14 miles above Charlotte town. Each of the rivers, Hillsborough, York, and Elliott, have a sufficient depth of water for the largest vessels for several miles, where they may lie secure from all winds, and the tides are so strong as to enable ships to work out and in against a contrary wind; the rise at full and change being nine feet, and at neap, four to five, with soundings of soft mud or strong clay.

The town appears from the harbour to great advantage, the streets are broad, and regularly laid out at right angles, with five or six vacancies for squares; most of the private houses have neat gardens attached, and together with the public buildings, such as the Court-house (in which the Courts of Judicature, as well as the Legislative Assembly, sit), the Episcopal church, the New Scots Church, the Roman Catholic and Methodist chapels, excellent barracks, &c., give a decidedly prepossessing aspect to the capital of this interesting colony.

The Colonial Building in Charlotte town

cost £14,500, was commenced in 1843, and is now finished.

The island is almost naturally divided into three counties, viz., Prince's on the W., Queen's in the middle, and King's on the E. Prince's county contains five parishes, viz., North, Egmont, Halifax, Richmond, and St. David's, which comprise 467,000 acres, exclusive of a reservation of 4,000 acres for Prince town and royalty. It has several fine harbours; two on the N. shore are very valuable, as the winding coast forms a deep curve in which it is dangerous for vessels to be caught in a stiff N.E. wind, in which the points of the island E. or W. cannot be cleared, and a ship must therefore run on shore, or else seek one of the large barred havens, into which two or three high seas will cast her safely.

Richmond Bay, the largest in the island, is barred with a sand bank, over which there is from 12 to 15 feet water; from its wide entrance and great extent (being 9 miles wide, and 10 miles deep), the centre part is of course unsheltered, but there are several inlets perfectly safe from all winds, with from 3 to 4 fathoms good anchorage. There are six beautiful islands in the bay, three of which have an area of 500 acres of good land. Seven townships, containing 140,000 acres, abut on this bay, which has the advantage of a safe inland water communication along the coast, by means of Cavendish channel, with the fine harbour of Holland Bay to the N.W. On a fertile peninsula projecting from the eastern-coast of Richmond Bay, Prince town has been laid out, but the intended site is occupied by straggling farms. The settlers are chiefly of Scottish descent, many of them being the descendants of those from Cantyre, who settled with Judge Stewart's family, and who retain the habits and superstitions that were formerly so prevalent in their native country, while the music, the songs, the tales of the Covenanters, and the ghost stories of Kirk Alloway have all the freshness of yesterday; indeed, it is not a little remarkable that many of the ancient customs and traditionary stories, now passing away, and nearly forgotten in England, Ireland, and Scotland, are religiously remembered and preserved in our colonies. The surrounding tract, called the Royalty, is well cultivated.

Lennox Island, situate on the N.W. of Richmond Bay, is the chief meeting place of the remnant of the Mic Mac Indians. Still further N., is Holland Bay, which is

safely accessible, but narrowed by islands at its entrance; its chief harbour, called Cascumpec, is extremely commodious, and well situated for the fisheries. Between this bay and that of Richmond, an extensive range of sand mounds have been formed by the waves, between which and the main shore is a lagoon, eighteen miles in length, and from one to three hundred yards in breadth. The shores of the lagoon are uninhabited. The fertile land round Holland Bay, is cultivated chiefly by Acadians, who have also a settlement called Tigniche, near the North Cape. From thence to West Cape there is no harbour except for boats; and a large portion of rich soil, though clothed with excellent timber, and watered by several fine streams, is still unoccupied. After passing West Cape, we arrive at Egmont Bay, which is sixteen miles wide and ten feet deep, with dangerous shoals off its entrance, and only affording shelter in N., N.E., or N.W. winds. On its eastern boundary are three Acadian villages. Halifax, or Bedeque Bay, is a spacious inlet, reaching nearly across to Richmond Bay on the opposite coast,—Wilmot and Webber Cove being only about five miles apart. It has a fine harbour, well sheltered by a small island, and is increasing in importance as a shipping port. The banks of the two small rivers which empty themselves into the harbour are populously settled, and there are several ship-building establishments.

Queen's County adjoins Prince's county on the S.E., and extends about 40 miles, embracing the whole width of the island. It contains five parishes—Grenville, Charlotte, Bedford, Hillsborough, and St. John; 486,400 acres being comprised in them, exclusive of the 7,300 reserved for Charlotte town and royalty. The N. coast of this country is extremely picturesque, but possessing few harbours, except for schooners and small vessels; their names and positions will be sufficiently shewn in the map; this portion of the coast is tolerably well settled, chiefly by Scotchmen and Acadians. On Grenville Bay and the banks of its small tributaries, are situated New London, Elizabeth town, Campbell town, and other settlements; that of Cavendish, at the E. end of the bay, is remarkably flourishing. Harrington, or Grand Rustico Bay, has a long narrow island across its entrance; on its shores are two Acadian villages, and on the banks of its tributary streams, Hunter and Whately rivers, are some thriving settlements: one of these, called New Glasgow,

is peopled principally by emigrants from the city of that name. On Little Rustico, or Stanhope Cove, is a tract of very fertile land containing many extensive farms. Eastward to Bedford Bay, and from thence to Savage Island, the coast is more or less occupied by settlers principally of Scottish descent. The south coast of this county abounds in safe havens. Tryon village, nearly opposite Green Bay, or Baie Verte, in Nova Scotia, is one of the most populous and pleasantly situated places in the island. Crapaud and De Sable are also rather thriving settlements. On the eastern side of Hillsborough Bay is the district of Belfast, which includes the thriving villages of Great and Little Belfast, Orwell (on the bay of that name), Pownalls, Perth, Belle Creek, Wood Islands, and others, chiefly formed by Lord Selkirk's colony.

King's County—comprises the eastern portion of the island, and is divided into four parishes, East, St. Patrick, St. George's, and St. Andrew's, which include 412,000 acres, exclusive of the 4,000 acres reserved for George town and Royalty. The town plot has been laid out near the confluence of the Cardigan, Montague, and Brudenelle rivers, or rather on a peninsula formed by them, and although little progress has yet been made, its excellent harbour, good fisheries, and advantageous position for trade in the Gulf of St. Lawrence, will probably render it a place of considerable importance. The coast land from Savage Harbour (between King's and Queen's county) to the Bay of St. Peter, is termed the Lake Settlement, from its bordering on a pond or lagoon, which has an outlet into the Gulf. The Bay of St. Peter, into which the river Morel falls, is about nine miles long, with a narrow mouth, and pierces the coast, forming the peninsula of Greenwich. The lands fronting the bay have been greatly improved by the Messrs. Worrel, who have built granaries, grist mill, and offices on a large scale. From Greenwich to East Cape, the whole line is without a harbour. It is called the District of the Capes, and is well cultivated by settlers from Scotland and the Hebrides, who raise large and valuable crops of wheat, barley, &c. On the east shore are Colville, Rollo, Fortune, Howe, and Boughton Bays, all small harbours with thriving settlements of Highlanders and Acadians. We have now reached Cardigan Bay, on which George town, the intended chief town of the district is situated. It receives

(as before mentioned) three rivers, of which, however, the largest does not flow above twelve miles, and forms a spacious harbour, with a deep and safe entrance. Panmure Island, situated at the entrance of the harbour, contains 800 acres of excellent land. In St. George's parish are several safe but small havens, all more or less sand-barred. St. Andrew's, at the mouth of the Montague, is a rising village. Murray Bay, in the parish of St. Andrew's, affords a well sheltered harbour, with a rather intricate entrance. Ships, brigs, and schooners are built here. The soil around is very fertile, but has not been many years under cultivation. The foregoing brief description is sufficient to show how admirably adapted Prince Edward Island is for carrying on an extensive fishery, while its level surface, abundantly irrigated, renders it equally favourable to the pursuits of agriculture, and with its singularly salubrious climate, make the little island an attractive spot to intending emigrants.

GEOLOGY.—Prince Edward Island is a pastoral country—neither limestone, gypsum, coal, nor iron, have yet been discovered, but in many places the earth and rivulets are deeply impregnated with metallic oxides; the soil is in general a light reddish loam—in some places approaching to a tolerably strong clay—in most districts more or less sandy, but where the latter inclines to a dark colour, it is very fruitful. Red clay for bricks, and white for common pottery purposes, are met with in abundance. The predominating rock is a reddish sandstone, but occasionally, blocks of granite are met with; in fact, the whole island seems to have been left dry in latter ages by the waters of the Gulf of St. Lawrence.

The following is an abstract of the geological survey of the island by Dr. Gesner, which, although long, is too valuable to admit of further curtailment:—

"Hillsborough Bay is an expanded sheet of water, situated between St. Peter's Island and Point Prim. It embraces three lesser bays, and receives a number of rivers. Of the latter, Hillsborough, York, and Elliot, or North River, are the most important. These, when united, form the harbour of Charlotte town, the capital of the island, which stands upon the extremity of a peninsula at the junction of these three streams. At this place the survey was commenced, and the descriptions will be given in the order in which they were made.

"The rocks are most advantageously examined in this quarter at the entrance of the harbour, which is only half a mile wide. They here present perpendicular cliffs from 10 to 20 feet in height; they are

frequently undermined by the waves and currents, and are sometimes seen in heaps of *debris* that have fallen on the beaches. All these rocks belong to an extensive group of red sandstones that form the basis of the island, and also appear on the neighbouring coasts of Nova Scotia and New Brunswick. At the mouth of the harbour they consist of brick-red sandstones, micaceous sandstones, gray sandstones, marly clay, and red shales. The general direction of the strata is E. and W., and the dip is from 10 to 15° N. The strata are covered by *debris* from those rocks, sometimes to the depth of 20 feet. The soil is also red, and frequently underlaid by a subsoil of stiff red clay.

"The shores of east, north, and west rivers are seldom bounded by cliffs, but descend gradually to the water, being frequently skirted by tracts of peaty ground, salt marsh, and a mixed alluvium; the rocks are similar to those above-mentioned; and a section taken near the Indian encampment, at the mouth of the west river, corresponds with others taken several miles farther westward. Reposing directly upon the rocks, there are frequently thick deposits of clay. One of these occurs opposite the town, near the Ferry Wharf, and on the property of Mrs. Desbrisay, and is very favourably situated for an extensive manufacture of bricks. In this district, and at many other places, a black porous sandstone, containing lignite, was observed; from its colour, and the presence of lignite, it has been supposed by some to be an indication of coal, but it seldom accompanies that important mineral.

"Outside of the harbour of Charlotte town, eastward, the cliffs are from 30 to 40 feet high, or thus: diluvium, 14; red sandstone, 10; conglomerate limestone, 4; red and chocolate sandstones, 8 = 36 feet. Conglomerate limestone occurs near the entrance of Charlotte Town harbour both eastward and westward of the Blockhouse. At the before-mentioned cliff it forms a strata between the sandstones. It resembles the common conglomerate of the coal group, being apparently a collection of small pebbles cemented together; but instead of quartzose or flinty pebbles, the nodules of the limestone and the cementing matter contain carbonate of lime. A piece of this rock, of medium purity, yielded of 100 parts—carbonate of lime, 68; silicious residuum, 44 = 112. The limestone at this place is therefore sufficiently pure for the purposes of agriculture, but its situation is unfavourable for quarrying any great quantity. A thin stratum of white and compact limestone appears at Bellevue, on the farm of Mr. Charles Hazard. At Lobster Point strata are again seen in a bold cliff, and dipping N.N.E. at an angle of 4°. From the soil downwards to low-water mark, they are as follows:—diluvium, 6; red sandstone, 5; red shale, 5; red sandstone, 5; red marly clay, 5; sandstone, 6 = 37 feet.

"From Lobster Point to Gallows Point the shore is low, and the mouths of the rivers and creeks are bordered by tracts of marsh, and the shores of the bay are lined with sandy beaches. Tea-hill, an eminence in a ridge of elevated land already noticed, disposes at several places rocks similar to those just named. Between the hill and Orwell Bay, and embracing the fronts of Lots 49 and 50, a large tract occupied by flourishing villages and bordered by marshes, is very low; much of the soil has been improved by the alluvium brought down by small streams that descend from the higher grounds. Marsh alluvium, or marsh mud and peat are abundant, and may be cheaply applied as compost manure.

"Governor's Island, in Hillsborough Bay, is situated

about five miles from the main land of which it once formed a part, the intervening land having been removed by the operations of the sea. At low tides the separating channels are still very narrow and shallow. The island contains upwards of 190 acres of excellent soil, a part of which is still covered by the original forest.

"The rocks of Governor's Island are different in their character from those just noticed, and from a few fossils contained in them, they appear to belong to the coal-field of the opposite coast. They are compact gray sandstones, conglomerate, red and blue shales, marls, and limestones. Pieces of copper ore have been found on the N. side of Governor's Island. Upwards of 20 lbs. of the ore was obtained—the best samples contain 40 per cent. of pure copper. The site of the ore was once occupied by a tree which has been fossilised by copper, and the vegetable texture of the wood can still be traced in the compact cupreous masses.

"Orwell, or Gallows Point, is a small peninsula between Pownall Bay and Orwell Bay. At its western extremity it is composed of rocks belonging to a coal formation—they are coarse and fine micaceous sandstones, conglomerates, red, white, and blue shales, fire clay, and blue compact, and conglomerate limestones. The general direction of the strata is N.N.E. 8°, but both are very variable, and the beds have evidently been much disturbed—at one place, a fault of four feet was observed. These rocks form a low indented cliff upon the shore, being covered by six feet of diluvium. Near the Point, a conglomerate limestone, like that of Governor's Island, appears near high-water mark, and thin strata of that rock occur in the cliff. This limestone also appears on the farms of Mr. Young and Mr. Mutch, where it gradually rises to the surface and becomes a compact blue rock, in a stratum from four to six feet in thickness. It is well situated for being quarried, and the limestone is of a good quality.

"The sandstones and conglomerates of the Point contain the remains of trees and other plants characteristic of the coal measures. The trees are all prostrate in and between the strata; the original bark has been changed into coal, and the woody parts of the trunks are now seen in masses of sandstone, iron ore, or sulphate of barytes; in the latter, the vegetable fibre still remains distinct. They are quite different from any of the trees now growing upon the island. A very thin seam of coal was found in the face of the cliff, in which there is also a small quantity of the sulphate of barytes associated with iron ore.

"The rocks of this imperfect coal-field were traced eastward into the country upwards of four miles, where they seem to terminate, or they are succeeded by the red sandstones or marls. At the extremity of Gallows Point, and opposite a low tract of peaty ground, there is a submerged forest: upwards of three acres are occupied by stumps and roots of the spruce, fir, and hemlock, which are covered by every tide, being from 4 to 8 feet below high-water mark. It is certain that these trees grew upon the spot where they are now seen, as their roots and the soil that nourished them are all present: their trunks have been broken down by the ice, and at low water the tract resembles the clearing of the new settler. From a variety of facts, it is probable that there has been a submergence of the land itself, of which there are proofs in different parts of the island. The rocks of the coal formation at Orwell Bay are succeeded by the red sandstones, which on the south side of the

bay form perpendicular cliffs from 36 to 70 feet high. The strata run east and west, with a general dip south of 15°; they are coarse and fine red sandstones, red shales and marly clay.

"At Point Prim, and thence to Flat River, Belle Creek, and Wood Islands, the coast is low, and often bordered by shingle beaches. Peat swamps are numerous. The soil, having resulted from the disintegration of the rocks, is red; still there are small patches of white sand, the fertility of which might be much improved from the abundant supplies of marsh and mussel mud situated along the sides of the rivers, creeks, and inlets. Southward of the Wood Islands, and at Burnt Woods, the cliffs of sandstone and red marl will average 35 feet in height. The direction of the strata is E., 32° S., dip. N. 30°, E. 10°. Near the residence of Mr. W. le Lacheur small quantities of manganese ore were seen in the soil. Near Bear Cape there is a collection of peat exposed to the sea.

"The shore on the E. side of Colville Bay was evidently inhabited in former days by the native Indians; and, from the character of their relics, they appear to have been Micmacs, the descendants of whom are still upon the island. These relics consist of axes, spears, and arrow points, and rude pots made of stone; barbed fish-bones, which they employed in fishing, are also found. Some of the arrow heads are made of Labrador felspar, agates, hornstone, and jasper. The felspar is identical with that found at Labrador: the agates are like those of the Bay of Fundy; and, as none of these minerals have been found *in situ* on the island, it is very probable that the pieces used by the Indians were brought from those places. From East Point to the entrance of St. Peter's Bay, a distance of nearly 40 miles, the coast is straight, very level, and not indented by a single river-mouth or harbour. The shore is bounded by a series of perpendicular and overhanging cliffs, which are notched only at those places where the rocks descend into the sea.

"Near St. Peter's Bay the coast is bold, and the cliffs are from 50 to 75 feet high. Against these natural precipices the sea dashes with great fury, and from the yielding nature of the rocks the dilapidation of the coast is very rapid. Softened by meteoric agents, and expanded by the frosts of winter, immense masses fall in the spring, and the shore is covered by *debris*, which is soon broken up and removed by the waves, the sand being thrown inwards upon the land by gales of wind. Most of the strata on this shore are similar to those of the opposite coast—indeed they are the same strata continued across the island. The following section was taken in St. Patrick's parish:—diluvium, descending 13 feet; fine red sandstone, 11; red shales, with their laminae of white limestone, 7; red marly clay, 8; red sandstones, 4; coarse red sandstones, 8; conglomerate, 12 = 63 feet.

"St. Peter's Bay is a narrow but deep indentation, and a safe harbour. Its mouth is protected by a chain of sandhills, having a narrow channel between them that is capable of admitting large ships at certain times of tides. These sandhills resemble the cones of extinct volcanoes: they are liable to constant change, and were they not covered with bent grass, they would be much more liable to drift away before the winds than they are at present. Near the mouth of the bay, a forest of hard wood, consisting of beech, birch, and maple, has been buried by the drifting sands; the ancient channel of the river has been filled

up; and the wharfs built by the French, who were the first civilized inhabitants, have all been buried in the shifting shingle. An opening formed by the sea during a gale, exposed a thick bed of oyster-shells and a number of Indian relics.

"The turnpike between St. Peter's and Charlotte Town passes over and between a number of diluvial gravelly mounds, frequently called by American geologists 'saddle-backs.' They are proofs of the former existence of powerful currents of water that have passed over the island previous to its elevation above the sea. Boulders of granite, sienite, trap, and other rocks are scattered over the surface of the southern division of the island, although they are less numerous here than they are farther north.

"The red sandstones, shales, and marly clay are again exposed at Cove Head, near the entrance of Little Rustico; they also appear at a number of localities at Grand Rustico and Hunter River. Great quantities of oyster and other shells are found upon the banks of the rivers and sides of the bays: they are sometimes six feet in thickness, and are covered by a soil containing much phosphate of lime. The separation of all the bivalve shells, and the rude instruments and even skeletons found in these deposits, show that they were made by the savages.

"At the fine settlement on the banks of Glasgow river the lands become more elevated, and they are broken by deep ravines, or narrow gorges. The rocks in this district, and on parts of the parishes of Grenville and Charlotte are chiefly coarse calcareous sandstones. The soil is a bright red clayey loam, and highly productive. The elevated ridges of wild land are covered with majestic forests of the hard woods. From New London Harbour to Richmond Bay the distance along the coast is about ten miles. The shore is again fronted by perpendicular cliffs from 40 to 60 feet high, called the 'Capes.' The rocks are thick and shelly strata of red and chocolate-coloured sandstones, with their beds of clay, and occasionally streaks of white limestone; the dip is very variable, and at many places the beds are horizontal.

"Sand-hills extend from Hog Island to Indian Island, and thence to Holland Harbour, or Cascumpec, the whole distance being upwards of 20 miles. They are only interrupted by the channel to Port Hill and Cavendish inlet, and forming a barrier between the upland and the sea, they effectually prevent the washing away of the soil by the tides and waves. Between this barrier of sand and the main shore there is a beautiful lagoon, averaging a quarter of a mile wide, and with sufficient water to allow boats and canoes to pass. While the sea outside is agitated by gales, the water of the lagoon remains tranquil, and offers a safe and easy channel of communication. The shore side of the lagoon is skirted by small marshes, and the sea-wall side by beaches and collections of alluvium, which, at the time of my visit, were occupied by great numbers of plover, herons, ducks, and other kinds of birds. The sandhills are covered by bent grass, which protects them from the influence of the wind. This grass is sometimes mowed, and employed by the inhabitants for fodder. At the entrance of the lagoon, and occasionally throughout its whole length, there are boulders, some of which will weigh ten tons. They are forced towards the shore by an expansion of the ice during the severe cold of winter. The rocks, wherever they were observed, do not differ from those already described, but, in consequence of the shore being very low, only a few of the most superficial

strata can be seen. A few families are settled on the side of the lagoon, but the surface of the country generally is an unbroken wilderness. At one situation the hard wood forest is seen standing upon the very margin of the salt water. The sea has flowed in among the beech, birches, and maples, by which they have been killed, and large pieces of drifted wood were observed among the decaying groves of the upland.

"One of the most remarkable circumstances in regard to the geology of the island was observed at Cascumpec harbour. On the south side of the bay there is a peat bog called the 'Black Bank,' reaching three miles along the shore, and containing nearly 2,000 square acres. It reposes directly upon the red sandstone and marly clay, and is from ten to twenty feet in thickness. This bog, with all its decayed spagnum plants, is of fresh-water origin. Two groves of spruce and fir were observed to be buried in it at different levels, and their trunks and roots may be seen projecting from the bank. The peat is of excellent quality, and will, in the course of time, be valuable.

"This deposit now forms one of the shores of the harbour, and at high water its lower part is seven feet beneath the level of the sea; it is constantly being washed away, and masses of it are seen scattered along the borders of the lagoon. At low water the side next to the bay is partially drained, so that the plants from which the peat has been derived have ceased to grow, and a part of the surface is quite dry.

"It is not improbable that the site of this peat-bog was once a lake which was gradually filled up by the growth and decay of the mosses and other plants; but if the lake had been below the common sea level, the tide would have found its way into it through the channel necessary to give exit to the streams coming in from the adjacent lands. Under such circumstances the mosses, spruce, fir, &c. could never have flourished, as sea-water destroys them; nor is it probable that this bog moved forwards like a glacier into the sea, from having the barrier between it and the gulf washed away. It is now as high as the surrounding land, and does not repose upon an inclined plane, over which it could move. The water of Cascumpec harbour is deep, and the shore is so bold opposite Savage Island, and near the residence of Messrs. W. and C. Woodman, that ships may lay afloat alongside of the land; yet, the surface of the earth is scarcely elevated seven feet above the top of a medium tide. From a variety of facts that might be quoted, it appears quite evident that parts of the island have been, within a comparatively recent period, submerged, while, perhaps, others may have been elevated.

"The evidences of elevation of different parts of the shores of the Gulf of St. Lawrence are evident from the collections of recent shells found in clay and marl beds now situated from 10 to 200 feet upwards above the present level of the ocean. In a very interesting paper, addressed by Captain Bayfield to Mr. Lyell, and published by the Geological Society of London, in 1839, this elevation of the land is stated to extend far up the river St. Lawrence. Besides this uplifting of the land at numerous places in British America, there has been a sinking down of the surface at certain localities; or, as it is understood by geologists, there has been a bending of the crust of the earth, by which some places have been elevated and others depressed—the ele-

vation having, as it is supposed, exceeded the depression.

"Admitting, then, that the tract of country where the above peat-bog is situated was lowered, the sea would immediately have extended its bounds, overflowed a part of the country, and finally have its margin upon the border of this bog. Savage Island, composed of red sandstone and diluvium, is still above the water, and the waves have raised a bar of sand, which the winds have since lifted into a ridge that is now stretched across the mouth of the bay.

"Between Westmoreland and Hillsborough Bay the lands are elevated, being occasionally broken by steep hills and deep ravines. Near the mouths of Tryon, Brokelby's, Rice, and Allan Coves, and between the latter and Fort Amherst, there are perpendicular cliffs from 40 to 60 feet high. These cliffs are also composed of the red sandstones, shales, and conglomerates, with conglomerate limestone. The following section was taken between St. Peter's and Allan's Cove:—diluvium 8 feet; conglomerate 4; red sandstone 10; red shale and marly clay 6; impure limestone 1; red sandstone 2; conglomerate limestone 4 = 35 feet.

"The course of the strata is N.E., with a general dip of 5° N.W. From the facts that have been noticed, and others that might be introduced, it appears very evident that, excepting the coal-field at Gallow's Point and the trap-rocks of Hog Island, Prince Edward Island consists of groups of red sandstone, the strata of which have been already described.

"*Alluviums* are produced by causes that are daily operating upon the surface of the earth. Frost, snow, rain, changes of temperature, &c., all tend to disintegrate the hardest rock, and finely divided mineral matter is constantly carried downwards by the shower, as well as by the flood, from the hills into the valleys, and spread along the borders of the streams by the overflowing of their waters. The sediment thus produced may be called the alluvium of rivers. Again, by the constant operations of the tides and waves of the sea, the shores are worn away, the sands of the sandstones and pebbles of the conglomerates are disunited and spread out in beaches, while the fine particles of clay and marl, from being mixed with the water, are transported to great distances, and finally thrown into the river mouths and estuaries, where they form estuaries of the sea.

"The alluvium of rivers and the alluviums of the sea, are often mixed on the coasts, the one being brought downwards by the fresh, and the latter inwards by the salt water. Such alluvial matter, whenever it is sufficiently drained, is the richest of natural soils, and, by being mixed with the sandy uplands, it will, in all ordinary cases, greatly increase their fertility. Alluvial deposits are very numerous on Prince Edward Island. At the extremity of Egmont Bay there is an alluvial tract of 2,000 acres. At Bedeque, lot 42, parish of St. Patrick, and other places, such tracts are also extensive. As the tides only recede a few feet, it is not probable that these tracts can be reclaimed by dikes, or embankments, yet they may be greatly improved even in their present condition, and they are valuable for the natural grass they produce for hay.

Peat is formed by the growth of sphagnum or mossy plants. Ponds, lakes, and low tracts are frequently filled by the productive powers of vegetation. The mosses first begin to grow around the shores;

each succeeding season yields a new crop; the preceding one having been buried beneath the water, where it is preserved from decomposition, and this process is carried forward until the lake or pond is filled. These plants will also close up the outlets by which the water makes its escape from low tracts. The result is the forming of ponds, and, as forest trees cannot grow in situations where their roots are constantly submerged, they decay, fall, and are finally buried in the peat, which spreads its annual layer even over the surface of the water. No sooner is the accumulation thus produced raised so high that there is not sufficient moisture on the surface to nourish the peat-forming plants, than the whole process is terminated, and the site becomes a barren waste. Peat bogs are numerous on the island, but, in general, they are small. The most extensive of them is at Cascumpec harbour. It contains 2,000 acres. These bogs will supply a useful article for compost manure, and afford fuel, should it ever be required.

"*A Marly Clay* is found interstratified with the sandstones; it sometimes contains ten per cent. of lime. Its value for manure may be tested by the application of a few drops of muriatic acid, the quantity of lime present will be indicated by the briskness of the effervescence. It will be useful when applied to light and sandy soils, which the clay will render retentive of moisture.

"*Bog Iron Ore; or, Hydrous Peroxide of Iron.*—This ore appears in the soil, and in bogs at many places. It has evidently been washed from the soil, to which it imparts the colour of the rust of iron.

"Several deposits of the hydrated oxide of manganese, or black wad, are noticed; they have been collected by a process similar to that by which bog ore is produced. By the disintegration of rocks containing manganese, the ore is set at liberty and washed by rains into shallow basins on the surface. It is frequently found associated with the hydrous peroxide of iron, and mixed with clay.

"The remains of ancient forests, now submerged beneath the sea, are not uncommon on the coasts of North America. The trees are such as usually grow on low land, and with them peat sometimes occurs. Several sunken forests are mentioned in Professor Hitchcock's Geology of Massachusetts. During the geological survey of New Brunswick, I discovered a submerged forest on the south side of the island of Grand Manan. At different localities in Nova Scotia there appears to have been a subsidence of the land. At Prince Edward Island this remarkable fact may be seen at Gallows Point, but more especially at Cascumpec, where, with a forest, a large peat bog is now beneath the level of the sea. Many theories have been proposed to account for such phenomena; yet it is probable that they can only be explained but by referring them to movements which are known to take place in the crust of the earth, whereby certain tracts are elevated and others are depressed.

"*Dunes or Sandhills.*—During storms the sand of the shore is often thrown up by the spray, and not withdrawn by the reflux of the wave, and having been dried by the heat of the sun, it is driven inwards upon the land by winds, and forms considerable elevations. Such hills are called dunes, for which the borders of the Nile are celebrated. Chains of such hills are stretched across the mouths of nearly all the bays of the eastern coast of the island, where they form harbours with narrow channels, and contribute much to the beauty of the scenery. The sand is also blown upon the uplands, where it sometimes,

by its constant accumulation, proves to be a serious injury to agriculture. The principal dunes are covered with bent grass, which, when it is firmly rooted, prevents a further progress of the sand. Trees and beach grass are sometimes planted in other parts of the world to arrest the moving drift.

"On the inner side of these dunes, a good alluvial soil is sometimes collected, upon which wild plants grow luxuriantly, and some tracts would produce wheat and clover. From the great abundance of oysters and other mollusca on the shore, these sands occasionally contain comminuted shells, and will effervesce in the strong acids. Such sand, from containing the phosphate of lime would be beneficially applied to heavy clay soils.

"*Boulders.*—Along the whole line of the northern part of the American continent, where it skirts the Atlantic, loose blocks of granite, sienite, trap, greenstone, porphyry, and other rocks are found scattered over the surface, and on formations from which they are altogether different. They vary in weight from a few pounds to fifty and even a hundred tons. They occur in the plains and valleys, and upon the table lands and hills. In some instances the angles of these masses have been worn off, as if they had been submitted to friction upon sea coasts: again they appear with sharp edges, as if they had been recently removed from the quarry.

"These masses of rock are called boulders, and may be properly classed with a variety of diluvium found with them on the surface of the earth. The surfaces of the solid rocks at numerous situations where these boulders are seen, are found to be furrowed and scratched in certain directions, as if hard and heavy bodies had passed over them with great force and friction. These are called diluvial grooves, which were evidently produced by the passages of the boulders during their transport.

"The boulders of this part of America are situated southward of the mountain masses from which they have been removed, and they have been traced, by geologists, to their birth-places. I have found erratic blocks of stone belonging to the central granitic ridges of New Brunswick, fifty miles and upwards southward of their original sites; and boulders from the mountains of Gaspé are scattered over the low lands of the northern part of New Brunswick, having been transported across the Bay Chaleur to the distance of eighty miles. The size of the boulders usually diminish in proportion to their distances from the parent mass.

"The forces by which these blocks have been removed have been directed from the north towards the south. The diluvial grooves run from north-west to south-east, and north-east to south-west, and there are still greater variations in their courses, or such as would arise from the passage of a sea over submarine mountains. Without entering upon any full description of diluvial drift and the causes that have produced it, I may remark, that boulders of granite, sienite, trap, &c., appear occasionally in every part of the province; they are, however, far more numerous on the northern part of the island than to the south, a circumstance that accords with a fact already noticed. The boulders are not only found upon the surface, but also lodged in collections of diluvial *debris*. The largest of these erratic blocks will weigh five tons and upwards, and as there are no rocks *in situ* of the kind on the island, some of them must have been transported to a distance of 200 miles and across the Gulf of St. Lawrence, where

it is 100 miles wide. Besides the boulders of igneous rocks among the drift at Crapaud, there are pieces of large fossil trees, like those of the strata, belonging to the coal-field of New Brunswick. These may have been imported from any part of the district between Bay Verte and Point Miscou, and over distances from 20 to 100 miles; certain it is they do not belong to the island, and therefore they are properly referred to the nearest rocks which contain fossil plants of a similar kind. Several theories have been proposed to explain the phenomena of boulders. Formerly, by many they were ascribed to the effects of the deluge recorded in the Mosaic history; but it is now known that causes are still in operation whereby they might have been transported. More recently an opinion has prevailed that they were moved by currents of water at that period when the districts where they are found were submerged beneath the sea. Still it is not probable that aqueous currents could ever have carried the boulders across the deepest sea channels to opposite shores, and up steep acclivities, even to the summits of mountains. By such causes masses of rock, gravel, sand, &c. are daily urged forward by the currents of rivers, but they do not afford satisfactory evidence that the boulders and diluvial drift, found under the above-mentioned circumstances, have been removed from their native situations to their present sites by the unaided operations of water.

"If we look to causes that are still active upon the earth, it will be observed that ice performs a most important part in the transportation of mineral matter. The immense icebergs and sheets that are annually formed in almost all the bays, rivers, and estuaries of the North American coast, embrace fragments of rocks, gravel, sand, drift-wood, and every thing that was in contact with them at the time of their congelation. In the spring, when by the heat of the sun the ice begins to dissolve, it is loosened from the shores, lifted by the spring tides, and carried by currents out to sea, or to other shores, with many of the materials it laid hold of during the months of intense cold. I have observed, also, that where the ice, loaded with boulders, is forced over the surfaces of rocks, they leave parallel grooves in the direction of the currents like those that occur on the faces of the strata now elevated far above the sea.

"This natural mode of transportation is carried on in a greater or lesser degree from the high latitudes where icebergs are formed, to the south, where water only freezes to the depth of a few inches; as the warmth of the spring or summer increases, and the ice dissolves, the transported rocks, sand, and gravel are liberated, and they fall to the bottom of the sea, are lodged upon its borders, or on the shores of the bays, inlets, and rivers. Minerals peculiar to the coast of Labrador are therefore found on the shores of Newfoundland, Cape Breton, Prince Edward Island, and on the Atlantic side of Nova Scotia. The rocks on the Gulf of St. Lawrence are carried to opposite shores, and thousands of boulders drop annually from the ice to the bottoms of the bays, and are scattered along the coasts. I found blocks of red sandstone of the head of the Bay of Fundy, at the western extremity of Grand Manan, the distance between the two sites being upwards of 170 miles. The trap-rocks on the south side of the Bay of Fundy are exchanged for the slates and grauwacke of New Brunswick, the distance between them being from 40 to 70 miles. The sandstones of Cumberland are sometimes brought into the basin of Mines; and manufactured grindstones were identified, a few years

ago, that had been brought from the former to the latter place, a distance of 140 miles, in masses of ice.

"It will be admitted by every practical geologist, that the chief part of the stratified rocks of North America have been formed beneath the sea, a fact established by the numerous remains of marine animals contained in them. Long since these rocks were consolidated they have been submerged, as may be proved by the recent shells now found in beds of marl and clay several hundred feet above the level of the sea. That Prince Edward Island has been raised from beneath the waters of the gulf, few will doubt who carefully examine its valleys and beds of diluvium. Guided by much corroborative testimony, a part of which has been referred to as briefly as possible, I cannot refrain from expressing my opinion that the boulders of Prince Edward Island have been brought hither by ice during that period when its surface was beneath the waters of the Gulf of St. Lawrence.

"*Diluvium*.—At many situations on the island, there are beds of small rounded stones, gravel, and sand, varying from 6 to 50 feet in thickness. These collections of *detritus* often form chains of oval hills, and skirt the flanks of the valleys in such a manner as to impress the mind with the belief that they were thrown up by the agency of water. Indeed, the stratification of the gravel and sand which appears occasionally, renders it quite evident that currents of water have been active agents in their accumulation; yet, many of these superficial deposits bear no marks of stratification. By an examination of the materials of these deposits, it will be observed that the rocks and minerals of which the fragments are composed do not belong to their present sites, being different in their characters from any of the strata of which the island is composed. Their origin and situation may therefore be properly ascribed to the same causes that transported the erratic boulders. The melting of large masses of stranded ice loaded with gravel and sand, leaves mounds and elevations upon the present shores, and the hills of unstratified diluvial *detritus* may therefore be accounted for by referring them to the melting of stranded ice during the boulder period. The appearance of such deposits would be much modified by the operations of currents of water, which have evidently opened many valleys, and spread the gravel out in strata.

"Another kind of diluvium is composed of pieces of red sandstone, red sandstone and clay, which in general repose upon the solid strata beneath. This *debris* has been derived from the red sandstones and shales of the island, and affords a more fertile soil than the imported variety. It is frequently mixed with the foreign drift, beneath which its principal beds are situated."

"*Climate*.—All who have ever visited the island can bear testimony to the salubrity of its climate, which is neither so cold in winter nor so hot in summer as that of Lower Canada, while it is free from the fogs which spread along the shores of Cape Breton and Nova Scotia. One hundred years of age, without ever knowing a day's sickness, is frequent in the island; the air is dry and bracing; the diseases of the North American continent are unknown, and puny British emigrants attain, soon after their arrival,

robust health and unwonted strength. No person ever saw an intermittent fever produced on the island—pulmonary consumption, so frequent in north and central America, is seldom met with—the greater proportion of the colonists live to old age, 90 to 100, and then die by a gradual decay of nature; deaths between twenty and fifty are very rare—accidents even included. It has been estimated that not one person in fifty inhabitants dies throughout the year; industry always secures a comfortable subsistence, and encourages early marriages; the women are often *grandmothers* at forty, and the mother and her daughters may each be seen with a child at the breast at the same time. Such is the happy condition of this simple and hospitable people, whose prospects are so far superior to that of their less fortunate brethren in England.

Mr. S. S. Hill, in his interesting "Short Account of Prince Edward Island," thus describes the climate:—

"The climate of Prince Edward Island is highly favourable to the pursuits of agriculture. It differs from that of England in the winter more than at any other season. The unwholesome and damp chills of an English winter are unknown in the island; and the diseases which a moist atmosphere originates, are uncommon at any time. The cold is more severe, and endures for a longer period; so that for about four months, all agricultural pursuits, properly so called, are of necessity suspended. But this is not of so much moment as to materially affect those interests which are connected with the soil; for the winter is both shorter and less severe in the island, than in those countries on the Baltic which export agricultural produce, and whose inhabitants are for the most part engaged in the rural occupations. The days too are considerably longer at that season in the island, than in those countries, which is material, both as to health and to labour.

"In the beginning of June, the summer bursts forth; and the natural forest, presenting to the eye every variety of vegetation, and filling the air with the fragrant perfumes of the native herbs of the island, gives abundant evidence of the fertility of the soil; and at the same time affords an opportunity for the lovers of nature to gratify their enthusiasm, or indulge their taste for contemplative enjoyment. The brilliancy of a summer night in the vicinity of the bays, cannot be surpassed by that which the finest climates under heaven exhibit. The wind is usually still, and the smooth surface of the water reflects the splendid lights of the firmament; and wherever the current runs, the fishes are heard sporting in the stream; and on the shore, whole acres are sometimes illuminated by the fire-flies, which emit flashes of light as they sport in the air; and now and then a torch is seen displayed at the bow of the canoe of some Indian engaged in spearing the eels.

"From this time, until the middle or the end of September, the climate resembles that of the southern coast of England. The thermometer, occasionally, during calm weather, shows a greater degree of heat than we experience in this country; but the sea

breeze seldom fails to lower the temperature, by the time the sun reaches the zenith, so that no inconvenience thence arises. But during the prevalence of the south-west winds, throughout the greater part of July, August, and September, the thermometer stands pretty steadily at from 75° to 80° of Fahrenheit during the mid-hours of the day; and, at night, the air is soft, wholesome, and agreeable.

"The hay harvest commences about the middle of July; and the white crops are usually cut between the middle and the last of August. About the middle of September the evenings begin to get cool, and the autumn properly commences. Nothing can exceed the beauty or the healthiness of this season of the year. The atmosphere is exceedingly rarified, and the deep azure of the clear sky reflects a darker shade upon the waters; while the forests, as they change from the rich green of summer to the thousand autumnal tints which the variety of their kinds exhibit, present scenery unsurpassed in beauty, or in the hopes of future plenty which they inspire, by any thing to be met with in the old or new world.

"The Aurora Borealis, though common at all times of the year, is, during the early part of autumn, more splendid than at any other season. It sometimes appears like the reflection of the lights of this great metropolis upon the sky, when seen from a distance upon a clear night; but it often covers the whole compass of heaven, and in red, blue, green, and yellow streams, illumines the wide expanse; and changing its colours as it continually flashes across the firmament, presents a spectacle unrivalled by any other phenomenon which nature anywhere displays."

Population.—We have no correct estimate of the progressive increase of the population; when taken from the French the island is supposed to have contained 6,000 Acadians; a great number of whom were afterwards removed. In 1802 the number of inhabitants was—males, 10,644; females, 10,007; total, 20,651: in 1822, males, 12,140; females, 12,460; total, 24,600: in 1825, males, 14,140; females, 14,460; total 28,600: in 1827, males, 11,976; females, 11,290; total, 23,266: in 1833, males, 16,840; females, 15,452; total, 32,292. In 1841, total population, 47,034; in 1849-50, about 55,000. Scotchmen form more than one-half of the whole population. The Acadian French are estimated at 5,000; but of the Mic-mac, or native Indians, there are probably not more than thirty families on the island. In 1841, the natives of England amounted to 2,650; of Scotland, 5,681; of Ireland, 5,193; of the British colonies, 1,755; of other countries, 194; and of Prince Edward Island, 31,561. Persons in connection with the church of England, 5,707; with the church of Scotland, 10,006; with presbyterians of Prince Edward Island, 5,089; with church of Rome, 20,430; methodists, 3,421; baptists, 1,609; other denominations, 772. The following complete census in 1841 shows in detail the state of the island:—

Census of the Population of Prince Edward Island, taken in the Year 1841, under the authority of the Act of 4th Victoria, Cap. 5.

NUMBER OF TOWNSHIP.	MALES.				FEMALES.				Total, including Servants and Apprentices.	Persons in connection with the Church of England.	Persons in connection with the Church of Scotland.	Presbyterians in connection with the Presbytery of P.E.I.	Roman Catholics.	Methodists.	Baptists.	Any other denomination.	Natives of England.	Natives of Scotland.	Natives of Ireland.	Natives of Prince Edward Island.	Natives of the British Colonies.	Natives of other Countries.	
	Under 16 years of age.	From 16 to 45.	From 45 to 60.	Upwards of 60.	Under 16 years of age.	From 16 to 45.	From 45 to 60.	Upwards of 60.															
One	199	149	17	17	215	151	14	11	783	19	1	763	1	1	1	1	2	1	81	621	77	1	
Two	86	44	12	3	72	51	9	1	277	6	1	271	1	1	1	1	2	1	8	253	77	1	
Three	43	32	13	5	42	28	7	1	160	24	9	111	1	1	1	1	3	16	25	102	14	1	
Four	92	65	13	5	73	51	4	1	305	47	63	73	113	3	6	1	17	25	36	193	12	2	
Five	97	58	15	7	99	62	14	6	335	35	12	26	275	9	1	1	34	32	287	18	1		
Six	52	31	8	3	48	39	6	1	188	11	2	38	139	1	1	1	1	2	5	176	4	1	
Seven	76	49	12	6	79	42	10	6	240	6	19	65	95	53	7	1	18	15	30	185	37	1	
Eight	45	31	6	1	51	35	2	6	179	6	25	77	77	21	21	11	23	1	1	53	59	1	
Nine	32	24	4	1	27	25	5	1	118	1	1	117	1	1	1	1	6	1	4	1	1	1	
Ten	11	7	1	1	10	1	1	1	35	24	1	1	1	1	1	1	1	1	4	1	1	1	
Eleven	77	46	11	3	69	38	9	1	254	88	13	30	117	6	1	1	5	8	76	162	2	1	
Twelve	51	23	5	3	49	22	4	1	157	100	1	40	6	6	1	1	20	1	1	125	7	1	
Thirteen	82	101	17	12	98	73	11	9	402	95	1	161	94	10	1	1	49	13	33	603	4	1	
Fourteen	143	115	18	15	138	103	18	9	565	5	1	116	444	1	1	1	3	40	4	502	14	1	
Fifteen	183	139	25	11	178	128	32	5	701	6	1	695	1	1	1	1	3	2	1	665	29	1	
Sixteen	122	100	22	14	120	106	16	9	493	42	1	218	221	1	10	1	23	39	41	379	10	1	
Seventeen	260	188	43	31	222	198	32	11	988	333	21	169	425	4	28	18	100	47	41	764	44	12	
Eighteen	224	161	37	20	220	184	33	20	899	67	1	466	229	34	1	2	18	67	40	750	24	1	
Nineteen	300	188	46	20	296	170	37	12	1069	196	12	234	435	79	9	43	86	116	132	695	35	6	
Twenty	368	158	36	23	240	160	29	16	1088	263	212	213	215	24	1	1	85	103	62	654	17	9	
Twenty-one	151	143	38	16	165	142	36	10	701	153	252	199	41	1	1	1	50	144	29	404	10	1	
Twenty-two	144	112	9	3	143	95	8	3	517	49	156	73	215	1	1	2	22	5	160	77	268	7	1
Twenty-three	250	196	42	19	179	131	63	15	967	130	123	183	308	119	2	102	137	172	18	620	19	1	
Twenty-four	393	274	62	30	310	277	79	22	1437	171	267	69	875	36	1	1	17	84	182	25	1191	1	1
Twenty-five	142	91	19	9	113	99	3	7	493	32	49	202	95	49	1	1	19	87	30	384	12	11	
Twenty-six	172	131	22	11	119	100	23	6	607	27	32	150	134	142	85	37	18	35	108	399	100	9	
Twenty-seven	223	118	32	16	199	143	23	6	760	84	16	473	138	85	1	1	16	43	111	438	43	4	
Twenty-eight	274	228	49	21	277	206	41	11	1130	53	305	36	153	403	84	1	60	81	68	842	64	11	
Twenty-nine	256	220	40	24	258	190	39	10	1025	202	292	53	191	217	45	139	105	208	539	32	2		
Thirty	72	49	13	8	68	55	10	8	273	10	224	1	87	3	1	1	69	29	171	1	1	1	
Thirty-one	142	108	38	11	156	118	28	9	630	160	209	73	112	30	46	1	71	97	46	416	1	1	
Thirty-two	235	178	36	18	232	188	40	28	945	309	220	71	166	78	101	1	101	99	62	665	20	8	
Thirty-three	213	175	42	19	212	164	26	11	872	214	327	120	115	65	1	40	173	112	86	492	7	2	
Thirty-four	336	261	75	46	321	266	70	26	1417	254	331	117	437	202	67	9	182	125	233	839	26	11	
Thirty-five	213	179	32	18	214	169	34	11	871	91	66	1	683	25	6	1	11	71	243	547	1	2	
Thirty-six	226	181	40	22	215	194	34	8	920	25	15	1	857	23	1	1	11	64	422	421	2	1	
Thirty-seven	134	151	26	12	134	142	17	13	629	34	41	19	535	1	1	1	26	47	62	481	13	1	
Thirty-eight	87	68	12	13	81	73	11	7	352	1	1	1	130	215	7	1	2	23	22	290	13	2	
Thirty-nine	84	74	14	13	73	64	13	6	341	6	1	1	224	3	1	1	12	44	24	290	26	1	
Forty	150	125	11	11	127	115	15	9	575	17	7	249	265	8	12	1	8	14	101	393	21	3	
Forty-one	120	121	21	15	119	120	15	11	551	9	28	100	414	1	1	1	5	81	23	421	21	1	
Forty-two	115	97	14	11	103	98	15	6	459	2	3	454	1	1	1	1	5	28	288	346	5	1	
Forty-three	170	144	29	7	192	143	23	9	717	1	3	423	1	1	1	1	3	27	19	647	13	8	
Forty-four	161	140	23	15	154	139	23	9	664	45	13	1	605	1	1	1	10	19	50	560	25	1	
Forty-five	242	168	36	11	218	163	32	13	892	26	16	3	828	1	9	1	5	84	100	735	100	4	
Forty-six	78	66	10	9	94	63	8	11	339	1	1	1	325	1	1	1	1	41	7	290	1	1	
Forty-seven	178	197	37	20	226	183	38	16	895	16	48	39	593	1	199	1	5	78	18	789	4	1	
Forty-eight	168	184	25	15	164	163	29	6	754	68	217	1	169	122	144	34	29	88	75	554	1	2	
Forty-nine	356	260	61	31	319	284	45	17	1373	162	181	10	689	198	97	36	25	64	176	1024	64	20	
Fifty	220	192	51	35	262	205	40	13	1018	138	316	18	574	88	15	69	167	53	750	10	6		
Fifty-one	132	77	11	8	124	84	9	3	448	10	172	1	137	1	129	1	159	66	199	24	1		
Fifty-two	89	62	20	8	108	74	18	1	283	32	167	1	102	1	82	1	18	125	19	212	9	1	
Fifty-three	100	99	13	14	112	86	12	11	447	47	92	14	218	1	76	1	15	97	24	283	18	1	
Fifty-four	65	41	14	5	60	47	13	5	250	12	9	11	218	1	1	1	4	15	16	170	12	1	
Fifty-five	157	151	17	16	151	132	25	18	667	13	141	3	490	8	12	1	14	156	4	490	1	2	
Fifty-six	126	107	32	10	144	106	26	11	562	40	1	227	284	3	1	1	31	37	27	451	25	1	
Fifty-seven	401	309	74	42	382	322	72	29	1631	8	1301	1	270	8	44	1	658	113	836	1289	269	29	
Fifty-eight	178	132	27	17	166	135	27	18	700	5	566	1	89	40	1	1	138	69	475	14	1		
Fifty-nine	80	88	17	11	79	73	16	7	362	149	1	73	23	56	1	23	58	30	233	16	2		
Sixty	131	85	24	13	123	105	21	14	516	1	513	1	2	1	1	1	228	2	276	10	1		
Sixty-one	55	61	11	7	67	58	10	9	278	28	46	13	152	26	3	10	27	23	17	188	22	1	
Sixty-two	119	128	31	14	141	110	20	11	564	1	517	1	42	1	1	1	197	3	307	57	1		
Sixty-three	72	80	14	4	90	69	9	2	340	14	187	12	94	1	33	16	61	37	207	19	1		
Sixty-four	234	176	29	17	223	1	26	15	886	82	323	1	60	296	10	115	92	144	14	537	92	7	
Sixty-five	307	205	51	28	241	192	46	27	1144	73	639	71	250	17	25	1	80						

LAND IN CULTIVATION, AGRICULTURAL PRODUCE, CATTLE, &c. 287

Statistical Return of Prince Edward Island, taken in the Year 1841, under the authority of the Act of 4th Victoria, Cap. 5.

NUMBER OF TOWNSHIP.	Acres held in fee simple.	Acres held under lease.	Acres held by written demises.	Acres held by verbal agree- ments.	Acres held by occupants, being neither Freeholders nor Tenants.	Persons who paid their own passages.	Acres of Arable Land.	Produce, in bushels, raised during the year 1840.				Horses.	Neat Cattle.	Sheep.	Hogs.	Places of Worship.	Schoolhouses.	Breweries and Distilleries.	Grist, Carding, and Saw Mills.
								Wheat	Barley	Oats	Potatoes								
One	117	..	8110	680	542	163	2606	2733	563	5863	25,890	174	711	1250	613	1	2	..	2
Two	..	..	1012	1055	400	19	820	839	316	1610	8583	61	213	835	160	..	1	..	..
Three	6010	600	..	..	1070	57	661	599	138	759	5447	26	134	213	113	..	1	..	..
Four	130	2668	300	600	150	108	719	1086	126	1357	10,200	42	248	311	189	..	..	..	..
Five	..	2253	150	510	290	68	981	834	209	3022	10,724	80	242	397	191	1	1	..	2
Six	..	791	..	100	1240	11	887	471	148	1552	7075	31	164	195	108	..	..	..	..
Seven	3150	..	..	1650	250	59	746	1475	151	1117	11,540	19	253	410	195	..	2	..	2
Eight	650	..	..	100	1880	17	400	856	205	719	6064	14	204	257	125	..	1	..	1
Nine	130	..	500	500	1560	..	251	265	93	224	4507	9	93	134	81	..	1	..	1
Ten	330	100	100	..	8	110	96	8	100	1230	..	24	38	13	..	..	..	..	..
Eleven	100	3120	..	1800	118	87	942	1062	140	1739	9731	50	273	393	197	..	1	..	..
Twelve	822	300	300	..	340	23	368	478	30	631	5410	13	126	236	145	..	1	..	2
Thirteen	5346	3020	284	245	160	90	2883	2527	498	5490	16,650	111	536	924	398	1	1	..	2
Fourteen	5051	1593	253	200	2110	64	1290	1920	507	6548	21,333	114	646	1168	662	2	2	..	4
Fifteen	8606	..	100	..	1350	36	2289	1683	742	5396	27,070	126	547	937	429	2	2	..	2
Sixteen	1380	4749	2330	..	505	107	8013	1838	568	7531	19,359	116	675	1088	428	1	1	..	1
Seventeen	18,159	2236	727	311	495	203	4933	4281	1157	17,472	49,021	218	1126	1729	783	2	2	..	4
Eighteen	8065	5306	..	..	101	44	4237	5470	566	18,503	39,690	268	1273	2177	929	1	1	..	4
Nineteen	2394	10,006	..	..	1510	104	3217	3802	926	17,220	43,360	173	1043	1562	774	1	1	..	..
Twenty	2580	7923	..	294	800	40	2725	3839	848	16,695	36,957	121	920	1691	736	2	2	..	3
Twenty-one	3275	2965	..	240	800	151	2294	3935	1009	14,603	35,110	174	707	1757	502	2	2	..	4
Twenty-two	911	4426	..	2800	..	231	1121	1464	445	6984	16,220	86	368	877	293	..	..	..	6
Twenty-three	1700	7935	150	238	1470	337	2972	2871	946	14,129	44,118	184	861	1611	682	4	2	..	2
Twenty-four	3112	9912	..	1850	704	197	4327	7213	2443	17,393	59,920	324	1204	2528	1262	1	2	..	1
Twenty-five	12,657	317	..	560	..	66	2730	3017	581	10,360	21,325	135	667	1183	444	2	2	..	0
Twenty-six	8691	4314	..	1100	915	129	3594	4415	1264	13,881	32,575	179	351	1656	601	3	4	..	7
Twenty-seven	4703	4242	150	277	440	230	2209	2625	1258	11,473	33,400	154	632	1143	581	1	3	..	2
Twenty-eight	7910	10,964	..	143	..	130	5657	6206	4649	20,694	81,325	338	1312	3114	895	..	5	..	10
Twenty-nine	262	10,467	1371	1475	..	430	3807	5008	3431	11,392	50,200	202	764	1309	616	2	2	..	8
Thirty	2433	2726	..	800	1050	93	1061	525	280	2263	11,255	47	173	265	115	..	1	..	4
Thirty-one	3800	2302	405	372	..	171	1607	1367	1062	7092	24,697	112	475	644	448	..	..	..	3
Thirty-two	4479	5649	410	613	..	131	1004	4255	2212	20,969	40,071	275	1683	1695	698	3	2	..	10
Thirty-three	6730	7144	..	360	435	..	4038	6109	1819	16,760	57,160	283	1085	2004	720	2	2	..	5
Thirty-four	3109	13,127	1634	498	..	497	6837	8209	4182	29,677	86,354	490	1682	2976	1342	6	5	3	3
Thirty-five	330	10,003	2418	200	100	249	2783	2397	1800	13,753	42,825	338	858	1409	832	..	1	..	1
Thirty-six	..	8917	3702	1530	250	427	1895	1325	1531	11,703	40,266	122	710	811	809	2	2	..	2
Thirty-seven	7548	1700	125	1228	400	87	2477	1640	1571	8438	36,113	185	746	1095	835	1	3	..	3
Thirty-eight	5212	1888	850	267	42	62	1120	1344	1280	5357	25,720	121	478	892	537	1	1	..	2
Thirty-nine	2835	440	..	662	70	77	1085	1219	755	5167	17,860	124	396	699	445	1	2	..	3
Forty	440	2384	..	188	1045	177	1347	1502	780	7654	31,116	139	479	791	683	1	1	..	2
Forty-one	365	1346	..	2462	425	124	1096	1313	1361	6384	30,542	120	544	1038	536	1	..	..	1
Forty-two	275	1740	..	100	1439	50	1352	811	1938	6082	27,516	133	432	892	450	..	1	..	3
Forty-three	1550	4154	817	344	250	..	1882	1460	2031	8383	48,841	191	602	1164	827	1	2	..	1
Forty-four	8145	472	..	200	722	55	1445	1139	2553	7050	40,095	140	542	896	725	2	1	..	2
Forty-five	1782	..	..	7571	145	1725	941	2612	..	45,967	148	659	1273	898	1	2	..	1	1
Forty-six	1782	..	360	..	1539	30	878	642	1794	6117	26,415	85	811	692	374	..	1	..	..
Forty-seven	8145	..	..	3714	102	2793	2085	5100	17,447	57,603	248	1013	2032	1102	2	3	..	3	3
Forty-eight	2848	..	..	65	131	124	2997	3801	1989	15,379	60,746	184	734	1348	478	2	2	..	8
Forty-nine	6405	5423	140	187	4691	147	4230	4147	2340	20,845	84,676	271	1164	1616	865	4	1	..	8
Fifty	7495	6984	100	310	235	137	3551	3774	1767	17,318	68,376	236	1243	1960	814	..	..	..	3
Fifty-one	2965	300	..	2640	950	61	850	912	233	2271	20,624	58	325	410	293	..	1	..	2
Fifty-two	1850	420	..	675	2597	49	891	750	422	2834	19,385	74	323	482	315	1	1	..	2
Fifty-three	1334	..	..	1752	200	39	1154	1384	851	5022	25,540	98	438	806	391	..	..	..	3
Fifty-four	1665	250	..	100	2851	19	513	449	256	2336	10,460	42	246	288	214	..	1	..	2
Fifty-five	9546	..	..	50	123	1203	1374	1829	7781	87,520	138	782	1055	524	1	1	..	1	1
Fifty-six	709	5691	..	250	200	63	1407	1286	1009	6168	37,220	142	556	929	594	..	..	..	4
Fifty-seven	8672	10,472	..	211	90	795	4496	2457	1801	23,112	63,760	250	1273	2333	852	2	3	..	5
Fifty-eight	5454	1550	50	150	650	225	2083	1090	784	10,995	27,670	131	511	968	355	1	1	..	2
Fifty-nine	1598	1498	160	129	364	95	906	1143	580	4437	18,550	94	333	497	325	..	1	..	8
Sixty	3795	1285	200	130	..	240	1438	931	340	6628	17,690	85	335	723	231	..	1	..	..
Sixty-one	1220	1878	380	420	466	64	767	1155	743	3797	17,343	72	254	479	333	..	..	..	2
Sixty-two	1993	3687	..	840	1165	257	1555	664	596	5674	20,540	94	365	678	272	..	1	..	..
Sixty-three	1335	1237	106	50	970	76	857	1485	1892	4564	22,500	80	265	422	151	1	1	..	..
Sixty-four	2882	2803	775	..	3285	184	1450	1544	808	4184	40,510	133	446	1139	344	2	3	..	4
Sixty-five	4129	6596	1679	3218	600	363	3509	3608	1739	11,087	45,734	209	713	1660	555	..	1	..	1
Sixty-six	..	..	..	65	2430	19	232	157	38	622	4930	15	95	72	96	..	1	..	1
Sixty-seven	6354	100	400	1400	..	268	924	1309	201	4841	13,710	51	424						

GOVERNMENT.—Prince Edward's Island has its own lieutenant-governor, council, and House of Assembly, constituted after the manner described in the preceding colonies; it is perfectly independent of the governor-general at Quebec in the civil administration of its affairs; its military are under the control of the Nova Scotia Commander of the Forces. The executive consists generally of nine, and the legislature of six members, appointed by the mandamus of the sovereign; and the Assembly comprises twenty-four members, elected by the people as in the other North American colonies. The form of procedure is that of the British Parliament. There is a Court of Chancery regulated after that at Westminster, over which the governor presides—and the jurisprudence of the colony is under the direction of a chief justice. The laws are English.

Military Defences.—The militia includes 2 lieutenant-colonels, 13 majors, 120 captains, 187 lieutenants, 118 ensigns, and 12 adjutants. The total force, officers and men, is 7302. There are four troops of cavalry, a detachment of artillery, and three regiments of infantry. The military defences comprise the St. George's battery of 11 guns in Charlotte town; Kent battery of 4 guns on the government house ground; York battery at the west entrance of the harbour, and a block house with 4 guns.

Religion.—Prince Edward Island is in the diocese of Halifax. There are six clergymen of the established church, of whom five are paid by the London "Society for Propagating the Gospel in Foreign Parts." The rector at Charlotte town receives from the Treasury £100 per annum, £100 a-year from the London Society for Propagating the Gospel, £360 a-year as garrison chaplain, £70 a-year for a house from his parishioners, and surplice fees. Churches are building in different parishes. There are no parsonage houses, and the glebes have been sold and devoted to education. The number of people professing different forms of religion, and the number of churches or temples of worship in each township are shown in the statistical table at page 287.

Education is promoted by a central academy at Charlotte town, which has 90 male pupils, a national school, with 30 male and 10 female pupils; and 110 district schools in different districts, which cost the colonial government about £1,000 a-year. Three school visitors superintend the district schools, one for each county, and report

annually to the legislature. There are two newspapers, efficiently conducted. Three infant schools were established in 1842 at Charlotte town, George town, and St. Eleanors, chiefly through the exertions and pecuniary aid given by Captain Orlebar, of the Royal Navy, who was employed upon the survey of the island. The master and mistress, Mr. and Mrs. Hubbard, were trained at the Gray's Inn Road Institute, London, and a committee of ladies, communicants of the Church of England, are entrusted with the supervision. Instruction is given to 100 children of ages varying from three to ten years, and in four years the number of pupils amounted to 530. The schools were devised for the benefit of the poor, and the scale of charges was two-pence a-week for children above six years of age, and three half-pence for younger children. The Bible is read daily, hymns sung, and cleanliness, truth-telling, and honesty enforced. A library is attached to each school. The system has answered well, and is worthy of imitation.

Crime—in 1847. In prison, felons 3 tried, 2 untried. Debtors, whites, males 60; females, 3; blacks, 2. Total number in confinement at Michaelmas, of all classes, 134.

Finance.—The first revenue attempted to be levied for the support of the government, as before stated, was the quit-rents—these failing in their extent, a parliamentary grant was applied for and obtained. In 1821 the revenue collected was £2,052; in 1826, £4,935; in 1836, £8,887; in 1846, £17,279.

Items of Revenue.	1846.	1847.
Impost on wines and spirits by permanent colonial enact- ment	£1,189	£1,839
Ditto by annual colonial enact- ment on wines and spirits, and an <i>ad valorem</i> on certain goods and wares	9,816	14,958
Land assessment	1,600	1,824
Spirit licenses	2-2	309
Tonnage duty	316	303
Post office	624	933
Rent of Warren farm	25	25
Wharfage, Charlotte town	175	178
Interest on bonded duties	273	121
Colonial secretary's fees	119	142
Her Majesty's customs	1,734	1,416
Incidental receipts	196	303
Crown land sales	512	201
Surplus money of sales	—	—
Under land assessment act	480	—
Immigrant tax	—	79
Total	17,261	22,631

From 1836 to 1848, the annual parliamentary grant was £3,070. The sum voted for the year 1849 was £2,000,—namely, £1,500 for the salary of the governor, and £500 pension to C. D. Smith, Esq., which was granted in 1824. The island will probably soon defray entirely its civil expenditure.

The Expenditure of Prince Edward Island was, in 1828, £6,749; in 1836, £16,477; in 1847, £21,574; and in 1848, £ . . . The civil establishment costs about £5,200; roads, bridges, and wharfs, £2,600 to £3,200; public buildings, £2,000; House of Assembly, £1,500; legislative council, £500; schools, £1,000; interest on outstanding warrants, £1,500; seed, grain, &c. to destitute settlers, £2,500; sheriff and gaol expenses, £300; printing and stationery, £330; lunatic and indigent persons, £280; coroner's inquest, £60; and various other items.

Paper Currency.—£11,650, issued by the government; and about £10,000 issued by banks in the neighbouring provinces.

Coin in circulation.—About £20,000.

Weights and Measures.—According to the standard of England.

Commerce.—In 1827, the total value of the imports was about £27,000, and the exports about £18,000. The imports in 1847 were valued at £143,647, and the exports at £71,228. The shipping built and exported are not included in this sum of £71,228. In 1846, eighty-two vessels were built in Prince Edward Island, whose tonnage was 12,012; and the value, at £5 to £6 per ton, would be about £66,000. In 1847, there were built 96 vessels; tonnage, 18,445. The vessels registered in the island in 1844 were, under 50 tons—number, 147; tons, 4,056: 50 tons and upwards—number, 90; tons, 9,805. The imports consist chiefly of manufactured goods, and the exports, of grain, potatoes, timber, fish, and ships.

The trade of Prince Edward Island with different countries is thus shown for 1847:—

Ports.	Imports from					Exports to				
	Great Britain.	British West Indies.	British North America.	Foreign Countries.	Total.	Great Britain.	British West Indies.	British North America.	Foreign Countries.	Total.
Charlotte town .	£48,803	£267	£50,943	£6,375	£106,390	£17,263	£249	£15,465	£496	£33,475
Three Rivers . .	1,546	—	15,069	690	17,305	9,913	—	4,217	325	14,446
Bedeque	30	—	2,388	—	2,418	782	—	4,922	—	5,705
Casumpee	0	—	339	—	339	409	—	1,737	—	2,147
Malpeque	6,833	—	2,164	—	8,997	3,261	—	6,305	—	9,567
Colville Bay . .	0	—	6,205	—	8,215	468	—	5,417	—	5,886
Total . .	£57,213	£267	£79,101	£7,065	£143,654	£32,196	£249	£38,063	£821	£71,226

Among the *imports* from Great Britain, at the port of Charlotte town, are—£16,894 of dry goods; £4,589 of hardware; £5,698 of cordage; £4,126 of iron; £12,528 of sundries. Among the *exports* to Great Britain, are—oats, 96,177 bushels; value, £5,322; timber, 4,769 tons, £3,991; deals, 1,197,902 feet, £2,836. The imports and exports of the other ports, as to trade with Great Britain, are in the same proportion.

Manufactures.—There has been recently established at Charlotte town an iron-foundry; and there is an establishment for drying, fulling, and dressing cloth at the same place. Linens and flannels are made for domestic use; and the colonists tan and dress leather.

Prices.—Wheat, 8s.; barley, 2s. 9d.; oats, 1s. 9d.; potatoes, 2s. 6d., per bushel; hay, per ton, £3 to £3 10s.; wheaten bread, per lb., 4d.; horned cattle, £5; horses, £15; sheep, 12s.; swine, £1; butter, per lb., 1s.;

milk, per quart, 4d.; cheese, 7d.; beef, 4d.; mutton, 3d.; pork, 3½d.; coffee, 1s.; tea, 4s.; sugar, 6d.; salt, 1d., per lb.; wine, 10s.; brandy, 12s.; beer, 1s., per gallon; tobacco, per lb., 1s.

Wages.—Domestic, £16 per annum.

Prince Edward Island is essentially an agricultural colony, and admirably adapted for industrious emigrants with small capitals. Crop after crop of wheat is raised without manuring; the barley is excellent, and oats much superior to any other of American growth; the potatoes and turnips cannot be exceeded anywhere; and peas and beans are equally good. Cabbage, carrots, and parsnips are produced as good as any in England; in fact, all the produce of English gardens will thrive here equally well.

The climate is particularly favourable to sheep; they are not subject to the rot, or any disease common to sheep in this country: they are small, but of excellent flavour; the

common size is about 60 pounds the carcase.

The rivers abound with trout, eels, mackerel, flounders, oysters, and lobsters, and some salmon; and the coast with cod-fish and herrings in great abundance. The latter, soon after the ice breaks away in the spring, rush into the harbours on the north side of the island in immense shoals, are taken by the inhabitants, in small nets, with very little trouble; and, as salt is cheap (not being subject to duty), most families barrel up a quantity for occasional use. The lobsters are in great abundance, and very large and fine. In Europe, this kind of shell-fish is only taken on the sea-coast amongst rocks; at Prince Edward Island they are taken in the rivers and on shallows, where they feed on a kind of sea-weed, called by the islanders eel-grass; and a person wading into the water half-leg deep might fill a bushel basket in half an hour. Many schooners are annually laden with oysters for Quebec and Newfoundland. The plenty of fish, and the ease with which it is procured, is of great assistance to the inhabitants, and in particular to new settlers, before they have time to raise food from the produce of the land. Hares and partridges are plenty, and are free for any person to kill; and in the spring and autumn great numbers of wild geese, ducks, and other water fowl visit the island.

The fisheries of Prince Edward Island have not been sufficiently attended to. The herring fishery is of great importance: it commences early in the spring, when the bays and harbours, particularly on the north side of the island, are no sooner clear of ice, than they are filled with immense shoals of those fish, which may be taken in any quantity: they are larger, though not so fat, generally, as those taken off the western coasts of Ireland and Scotland, and partake more of the character of the Swedish herring. Alewives, or gaspereau, although not so plentiful as the herring, appear in large quantities. Mackerel are in great abundance on the coast and in the harbours, from June to November. Cod are taken extensively in every part of the Gulf of St. Lawrence, more particularly on the coast of Prince Edward Island, the bay of Chaleur, and in the straits of Belleisle. Trout are found everywhere extremely fine, and often very large: the halibut caught some-

times weigh 300 pounds. Sturgeons are common in the summer months in all the harbours, some measuring six to seven feet in length. Perch are found in the rivers and ponds that have a communication with the sea. Indeed, if the fisheries of this fine island were more attended to, they would add much to the value of property, while their pursuit would stimulate the progress of agriculture and the colonization of the settlement. In 1847, the quantity of dry fish exported was 7,440 quintals; and of pickled, 967 barrels.

The island could support with ease ten times its present population, as almost the whole area is capable of cultivation, and the augmentation of its commerce and revenue shews the prosperous state of the colony. Dr. Gesner says, "In few places have there been greater changes of fortune. Individuals of wealth and respectability, by misguided speculations, have been reduced to poverty; and persons without education, capital, or experience, have rapidly risen to affluence. A person who, a few years ago, came from England in the capacity of a cook, was employed in a ship-yard, and recently his former master was among the number of his servants. He now owns extensive tracts of land, farms, mills of different kinds, and a great variety of other property. During the past year he has built no less than ten ships, and loaded them with timber for Great Britain. He is a man of influence, and has several times been elected a member of the House of Assembly. There are not thirty words in his whole vocabulary, yet all his sayings and doings are characterised by sound sense and correct judgment."

The former custom of granting leases of land for 999 years, at an annual rent varying from one to two shillings per acre, still prevails; for the first, second, and third years no rent is required—then three-pence per acre, and this sum is annually increased until the maximum of two shillings is attained. Proprietors are reducing the term to 99 years, which is reasonable. When land may be thus obtained in the British Empire on such low terms, capable of yielding all the necessities of life, it is to be hoped that the parishes of England will avail themselves of such means to provide permanently for the relief of the rate-payers, and for the employment of their able-bodied poor.

BOOK V.—NEWFOUNDLAND AND LABRADOR.

CHAPTER I.

GEOGRAPHICAL POSITION, AREA, AND HISTORY.

THE island of Newfoundland is situated on the N.E. side of the main entrance to the Gulf of St. Lawrence, between $46^{\circ} 40'$ and $51^{\circ} 39'$ N. lat., and between $52^{\circ} 44'$ and $59^{\circ} 31'$ W. long. It is divided from the coast of Labrador on the N. and N.E. by the straits of Belle Isle (which do not exceed 12 miles in width, and offer a difficult and circuitous passage into the Gulf:) its southwestern extremity approaches within 50 miles of Cape Breton, and on the N.W. the Gulf of St. Lawrence separates it from Canada. Newfoundland is the nearest to Europe of any part of America; the distance from St. John's, in Newfoundland, to Port Valentia, on the west coast of Ireland, being 1,656 miles. Bouchette states its extreme length, measured on a curve, from Cape Race to Grignet Bay, at 419 miles; its extreme width, from Cape Ray to Cape Bonavista, at about 300 miles, and its circuit at little short of 1,000 miles. Its area comprises about 36,000 square miles.

HISTORY.—According to tradition (supported, it would appear, by historical evidence of considerable weight) the island was discovered by Biarne, or Biorn, a *sea king*, or pirate of Ireland, who, being driven thither by contrary winds, is said to have taken shelter near Port Grace harbour, about the year 1,000. Robertson and Pinkerton were of opinion, that Newfoundland was first colonized by the Norwegians. Some years ago, a party of settlers, proceeding up a river which falls into Conception Bay, observed at a distance of six or seven miles from the bay the appearance of stone walls rising above the surface. On removing the sand and alluvial earth, they ascertained these to be the remains of ancient buildings, with oak beams, and millstones sunk in oaken beds; inclosures resembling gardens were also traced out, and plants of various kinds, not indigenous to the island, were growing around. Among the ruins were found different European coins, some of

Dutch gold, considered to be old Flemish coins, others of copper, without inscriptions.

According to a paper furnished to the Royal Geographical Society, doubts are entertained of the antiquity of the buildings, which are supposed by Captain Robinson to be probably of no more ancient date than the settlement of Lord Baltimore; but the finding of coins of virgin gold is not questioned. This, however, is a matter of antiquarian research, which does not come within the limits of the present work. We, therefore, pass on to the re-discovery of the island by Cabot, who, having obtained a commission from Henry VII. during his first voyage in 1497, observed a headland, which he called *Prima Vista*.

"It has been conjectured by some," says lieutenant-colonel Sir Richard Bonnycastle, in his valuable work, entitled *Newfoundland* in 1842, "that Cabot must have meant Labrador as the place of his discovery, because there are no white bears" (mentioned by Cabot in the brief account of his voyage, written by him on a map, which was deposited in the Privy Gallery at Whitehall,) "in Newfoundland. This, I apprehend, is false reasoning. There is a place even on the south coast called White Bear Bay, and it is quite probable that the polar bear has, like the walrus or sea-horse, been driven away by the increasing fisheries." However this may be, it certainly was discovered by Cabot in this voyage, and, on that account, ever after claimed by Britain. In 1550, the *new-found* island was visited by Cortereal, who, after giving Conception Bay the name it still bears, sailed along the coast of Northern America, then called *Baccalaos*, from an Indian word signifying cod-fish. The fisheries of Newfoundland speedily drew attention; and the crew of an English ship, on returning home, stated that they had left 40 vessels,—Portuguese, French, and Spanish, engaged therein. The details of the voyage of Verrazano, in 1525, on which

the French founded their claim to Newfoundland and the adjacent provinces, are exceedingly vague. In 1534, Jacques Cartier arrived at Cape Bonavista, and, on his return to France, was most favourably received. An expedition was fitted out, under his direction, in the following year, whose success has been already mentioned at the commencement of the history of Canada. About this time several attempts were made by England to colonize Newfoundland. "Master Robert Hore," a merchant of London, "with divers other gentlemen," sailed in 1536, thinking to winter there; but the crew were nearly starved to death, compelled to resort to the most loathsome expedients, and would have perished had they not met with a French ship laden with provisions, which they seized, and brought to England. Henry VIII. of England satisfied the French claim for indemnity by paying for the seized vessel. The expedition, in 1583 of Sir Humphrey Gilbert, the half-brother of Sir Walter Raleigh, has been already recounted, (see page 3, Vol. I.) but the following detail respecting the death of the gallant adventurer may not be unacceptable:—"Sir Humphrey, on his return from surveying the coast in the *Little Squirrel*, learned the wreck of the *Delight* from those who had escaped. He then reluctantly made preparations for crossing the ocean, declaring that he 'would fit out an expedition royally, and return next spring.' He was strongly urged to quit the nut-shell in which he had embarked, and go on board the *Golden Hind*. His reply is characteristic of the brother-in-law of Raleigh, 'I will not forsake my little company, with whom I have passed so many storms and perils.' They reached the Azores in safety, but there encountered a storm of so terrible a nature that it quailed their hearts, Sir Humphrey alone retaining his self-possession. The *Golden Hind* kept as near the *Little Squirrel* and her brave admiral as the perilous mountains of water would permit, and the crew, in their dismay, saw him sitting and calmly reading on the deck, and heard him bid them be of good cheer, 'for,' said he, 'we are as near to heaven by sea as by land.' At night the blackness of darkness fell upon the ocean, the lights in the *Squirrel* suddenly disappeared, and this is all that will ever be chronicled of the fate of one of the bravest of the adventurers who sought, in the glorious reign of Elizabeth, to extend the dominion of England in the western

world. Of all the armament the *Golden Hind* alone reached England, and she was a mere wreck."—(See Bonnycastle's *Newfoundland in 1842*, and Hackluyt, page 679.)

In 1585, according to our next accounts, a voyage was made to Newfoundland by Sir Bernard Drake, who claimed its sovereignty and fishery in the name of Queen Elizabeth. Sir Bernard seized several Portuguese ships laden with fish, and oil, and furs, and returned to England; but, owing to the war with Spain, and the alarm caused by the Spanish armada, several years elapsed before another voyage was made to the island. An effort for its colonization was made in 1610, in virtue of a patent granted by James I. to the Lord Chancellor Bacon, Lord Verulam, the Earl of Northampton, Lord Chief Baron Tanfield, Sir John Doddridge, and forty other persons, under the designation of the "Treasurer and Company of Adventurers and Planters of the Cities of London and Bristol for the Colony of Newfoundland." The patent granted the lands between Capes St. Mary and Bonavista, with the seas and islands lying within *ten* leagues of the coast, for the purpose of securing for ever the trade of fishing to British subjects. Mr. Guy, an intelligent and enterprising merchant of Bristol, who planned this expedition, settled in Conception Bay, remained there two years, and then returned to England, leaving the colony (of whose capacities he had given a somewhat exaggerated description in his letters home), in charge of William Colston, whose report concerning the island is far less favourable. Twenty-five of the settlers were seized with scurvy, six of whom died, the rest had recovered, it is stated, by using turnips. Guy went back in the summer of 1612, and exerted himself successfully in the arrangement of the colony. He undertook a survey of the coast, and met with two canoes of Red Indians, with whom he held friendly intercourse. From this period little is known of him; he appears to have subsequently abandoned the settlement, which, deprived of his energy and example, soon languished.

In 1615, Captain Whitbourne, a contemporary of Sir Humphrey Gilbert and Sir Bernard Drake, who had himself made many voyages to Newfoundland, was sent there with a commission from the admiralty, to establish order, investigate the abuses complained of by the fishermen, and repress the flagrant dishonesty too generally manifested. Immediately on his arrival he held a court,

at which one hundred and seventy masters of vessels submitted themselves to his jurisdiction, and he endeavoured to empanel juries in the most frequented harbours. Two years from this period, Whitbourne was appointed chief of a body of Welshmen, dispatched by Doctor Vaughan to form a settlement called Cambriol (now Little Britain) in the south part of the island, on land purchased from the patentees. The first effort, however, which can be said to have been attended with permanent success, was that made in 1623 by Sir George Calvert, afterwards Lord Baltimore, who having obtained the grant of a considerable tract between Cape St. Mary and the Bay of Bulls (corruptly so called from the French name, "Baie des Boules,") determined upon establishing himself there with a number of his countrymen, who, with him, belonged to the church of Rome. The settlers fixed their head-quarters at Ferriland, where Lord Baltimore built a strong fort and good house, in which he resided until about twenty years from the first foundation of the settlement, which he called Avalon, from the ancient name of Glastonbury, where Christianity was first preached in Britain. At the expiration of this period his lordship returned to England, and through the favour of Charles I. founded a colony on the shores of Maryland, from which arose the fine city which bears his name. Another colony was sent to Newfoundland from Ireland by its then lord lieutenant Cary, Lord Falkland. In 1635, the king granted permission to the French to cure and dry fish, on condition of their paying five per cent. of the produce. In 1660 they formed a settlement in the Bay of Placentia, which they long continued to occupy. In 1654, Sir David Kirk, having obtained from parliament a grant of land, proceeded thither with a few settlers; notwithstanding the continual bickering between the British and the French, who had established a colony at Placentia, the British population had increased to about 350 families. In 1663 we find a very interesting document issued by Charles I., and directed to the Lord Treasurer and others, desiring them "to erect a common fishery as a *nursery for seamen*;" and containing the first regulations for the "governing of his majesty's subjects *inhabiting in Newfoundland*, or trafficking in bays." In this year the British fisheries were exempted entirely from tax or toll, and the island would doubtless have rapidly increased in population

and prosperity but for the unjustifiable line of conduct pursued by the board of trade and plantations, to which they were instigated by the selfish jealousy of the parties by whom the fisheries were carried on. In 1670 Sir Josiah Child, the principal person connected with them, published a pamphlet to prove that the cod fishery had declined since 1605, which he stated then employed 250 vessels, and did not now engage above 80. He imputed this decrease to the boat fishery carried on by the inhabitants along the coast, and he urged that if they were permitted to multiply, they could carry on the whole fishery, and the nursery of seamen be thus destroyed. He therefore advised not only the forcible prevention of any further immigration taking place in Newfoundland, but urged the remedy of displanting. To the calm and dispassionate reader it must appear barely credible that such a suggestion could be for a moment entertained, much less acted upon by a British government, yet this was actually the case. In the year 1667 the residents had applied for a governor, but their request had been set aside in consequence of its being violently opposed by the English merchants; in 1674 they renewed their application, which was rejected, and Sir John Berry was sent out with orders for the deportation of the settlers, the destruction of their houses, and in fact the entire uprooting of the thriving colony which had been reared at the heavy cost of the energies, treasure, and even life-blood, of several of England's best and bravest sons. Happily for the wretched people, Sir John Berry was a man of humane character, and while mitigating as far as lay in his power his cruel commission, he sent home strong remonstrances against the misery which he was reluctantly compelled to occasion. In 1676, Mr. Downing, one of the residents, obtained an order from the king, to prevent any further persecution, accompanied however by strict injunctions, forbidding any vessel to take out emigrants, or any person to settle in Newfoundland. Complaints constantly assailed the government that these laws were evaded; representations were made on one side and counter-representations on the other, but no further rigorous measures appear to have been taken, and in 1697 the board of trade published a report, stating that a number of inhabitants, not exceeding one thousand, might be usefully employed in constructing boats, stages for drying the fish, and other

matters connected with the fisheries. On the accession of William III., war broke out with France, one of the causes on the part of Britain being set forth as follows:—"That of late the incroachments of the French upon Newfoundland, and his majesty's subjects' trade and fishery there, had been more like the invasions of an enemy than becoming friends, who *enjoyed the advantages of that trade only by permission.*" The French on their part avowed their desire to attain exclusive possession of the island. In September, 1692, commander Williams attacked Placentia, but owing to the spirited defence of the French governor, the expedition succeeded only in burning the works on Point Vesti. On the other hand Chevalier Nesmond, in 1696 arrived with a squadron, and aided by the force on the island, made a descent on the town and harbour of St. John, but having failed he returned to France. Before the close of the year the French were more successful, for another squadron arriving under Brouillon, he in concert with Ibberville the French commander, attacked St. John, which being now short of military stores, and in a very defenceless state, was compelled to surrender, upon which the town and fort were set on fire, and the garrison sent on parole to England.

The French admiral appears to have done nothing further in consequence of a misunderstanding with Ibberville, who commanded the troops, proceeded to destroy by fire and the sword all the British stations, excepting those at Bonavista and Carbonier (on Conception Bay), where he was successfully resisted by the settlers; he then returned to Placentia. "The dogs of war" seemed now fairly let loose on the unhappy island, whose possession both France and England showed themselves resolved to contest to the uttermost. A British squadron, with 1,500 men on board, was dispatched, under the command of admiral Nevil and Sir John Gibson, but owing to the cowardice of one commander and the ignorance of the other, nothing was effected to retrieve the disastrous position of affairs, until the peace of Ryswick, in 1698, put an end to hostilities, and replaced matters, as far as possible, in the position they were in prior to the war. Several acts of parliament were passed, regulating the fisheries (now declared free to all his majesty's subjects) and the importation of fish, taken by foreigners in foreign ships, was strictly prohibited. An attempt was made to remedy the disorder

and misrule which had now reached an alarming height, by directing that the master of the first ship arriving at any station, should receive the title of admiral for the season, and the second and third those of rear and vice-admirals, and that they should be invested with a certain jurisdiction over the seamen and fishermen. The effect of the shifting and irresponsible tribunal thus established proved very unsatisfactory, for the judges, notwithstanding their high-sounding titles, were repeatedly bribed by presents of fish to give false decisions, as might have been expected from the general laxity which had long prevailed. The brief interval of peace was very differently employed by the rival nations. The French wisely encouraged colonization, and gradually occupied the most important positions in Newfoundland; the English continued to discourage it, and speedily experienced the effects of their misjudged policy, since in the war which began in 1702, Newfoundland (in the words of Sir Richard Bonnycastle) "instead of having a hardy native population to resist or overwhelm their ambitious and restless neighbours, had to depend on the occasional presence of ships of war." On the declaration of the famous "war of the succession," Sir John Leake was immediately dispatched by Queen Anne with a small squadron, to take possession of the whole island, which he failed in doing, although he succeeded in destroying several French settlements and capturing a number of vessels, with which he returned to England at the close of the year. In August, 1703, admiral Graydon was sent with a fresh fleet off the coast of Newfoundland, but owing to a fog, which continued with great density for thirty days, his ships were dispersed, and could not be brought together till the 3rd of September. He then called a council of war, as to the practicability of attacking the strong-hold of the French, at Placentia, and it was decided that it would not be prudent to do so with the force at his disposal; on which he returned to England, where his conduct was severely censured. In 1705 the garrison of Placentia, reinforced by 500 men from Canada, attacked the British colonists, and attempted to become sole masters of the island by attacking the harbour of St. John's, where they were repulsed, but they succeeded in gaining possession of several settlements, destroyed Fort Forillon, and spread their ravages as far north as Bonavista. In 1706, the British

again expelled them from their recent conquests, and Captain Underdown, with only ten ships, destroyed several of the enemy's vessels in the harbours along the coast, notwithstanding that the French had as many as ten armed vessels on that station. Although parliament earnestly entreated the queen to "use her royal endeavours to recover and preserve the ancient possessions, trade, and fisheries of Newfoundland," little attention was paid to their urgent address, the whole disposable force being assigned to the Duke of Marlborough, at that time in the midst of his victorious career. The French, however, notwithstanding their repeated disasters on the continent, still found leisure to persevere in their endeavours for the expulsion of the English from Newfoundland, and accordingly St. Ovide, the French commander at Placentia, having effected a landing without being discovered, within five leagues of St. John's, attacked and completely destroyed it, on the 1st of January, 1708.

The French then seized on every English station except Carbonier, which was again bravely defended by the fishermen.

The news of this misfortune produced great excitement in England, as the possession of the fisheries had ever been considered a point of immense importance, and an expedition was ordered, under Captain G. Martin, and colonel Francis Nicholson, to attempt to dispossess the French, but little was effected beyond the destruction of a few fishing stations. The British government being fully occupied by the events then taking place on the continent, were unable to take any immediate measures for the recovery of Newfoundland; but at the close of the war their brilliant successes enabled them to demand its restitution, which Louis XIV. was no longer in a condition to refuse, and by the celebrated treaty of Utrecht, in 1713, Louis conceded the exclusive sovereignty of Newfoundland and the adjacent islands to Great Britain, but retained for his subjects the right to cure and dry fish on the coast lying between Cape Bonavista, on the eastern side, and Point Riche, on the western, and also to occupy the islets of Pierre and Miquelon, with a garrison of fifty men on each. Of this permission the French availed themselves so actively, that in 1721 they employed 400 vessels in the trade, and not only supplied France with fish, but even rivalled the British in the ports of Spain and the Mediterranean, al-

though they also were actively engaged in carrying on the fisheries. In spite of every disadvantage colonization was making rapid strides, and in 1729, on the representations of Lord Vere Beauclerk, the naval commander stationed at Newfoundland, the island was withdrawn from the nominal administration of the governor of Nova Scotia, and formed into a separate province. Captain Henry Osborne, of H.M.S. Squirrel, was appointed governor and commander-in-chief, but required by his commission to obey the instructions of Lord Vere Beauclerk. He was empowered to appoint justices of the peace and other officers, and copies of *Shaw's Practical Justice of the Peace*, and of the leading enactments relating to the country, were sent to the eleven principal stations. The governor was indefatigable in his exertions: he built a jail and court-house, and held his courts of record according to the laws of England, notwithstanding the opposition he encountered from the "fishing admirals," while even from the justices of the peace appointed by himself he did not receive zealous support, as according to chief justice Reeves, "partly from the indifference of some of the justices in their offices, who thought they suffered in their way of trade, and got the ill-will of the people they dealt with, and partly from the incapacity of others, the commissions of the peace were but indifferently executed." The home government at length awakened to the necessity of establishing a regular system of jurisdiction in Newfoundland, would no longer be influenced by the intrigues of an interested and selfish party, and to this end measures were discussed and adopted. In 1742, a court of admiralty was appointed, and in 1751, much difficulty and expense having arisen from the local authorities not having the power of life and death, Captain Drake, then governor, was directed to appoint commissioners of Oyer and Terminer for the trial of felons in Newfoundland. In 1754 Lord Baltimore renewed his claim for the tract of country called the Province of Avalon, but the board of trade decided the title to have lapsed. At this period the naval governors (according to Sir R. Bonnycastle) usually remained in charge of the ships appointed to protect the fisheries for two or three years, going home at the close of every autumn, and living chiefly afloat. In 1765 war recommenced between France and England, and Newfoundland was left in a very defenceless state, of which a French

squadron taking advantage, arrived in the Bay of Bulls in 1762, and succeeded in capturing St. John's, Carbonier, and the village of Trinity. Tidings of these disasters were despatched to Lord Colville, the British commander-in-chief, then stationed at Halifax, who lost no time in obeying the summons, and succeeded in dislodging the French, and obliging their Admiral (de Ternay) to make a precipitate retreat. The zealous exertions of the colonists, and the decided loyalty manifested by them, deserve especial notice. Two remarkable instances are cited by Sir R. Bonnycastle. One gentleman, Mr. Carter, of Ferryland, supported the garrison and inhabitants who had fled from St. John's to the Isle aux Bois, from the 24th of June to the 9th of October, 1762, by procuring provisions and other necessaries, although he could obtain them only with great difficulty, and at an exorbitant price; and Mr. Charles Garland, then a merchant at Carbonier, in Conception Bay, paid, fed, and supported a detachment of men who garrisoned a large battery on an island near the mouth of the harbour, and raised numerous squads of sailors for the temporary use of the fleet. On the 10th of February, 1763, by the famous peace of Paris, France formally yielded Newfoundland with the other American colonies, and England confirmed the thirteenth article of the Treaty of Utrecht, by the fifth and sixth articles of the Peace of Paris, of which articles I subjoin a copy:—

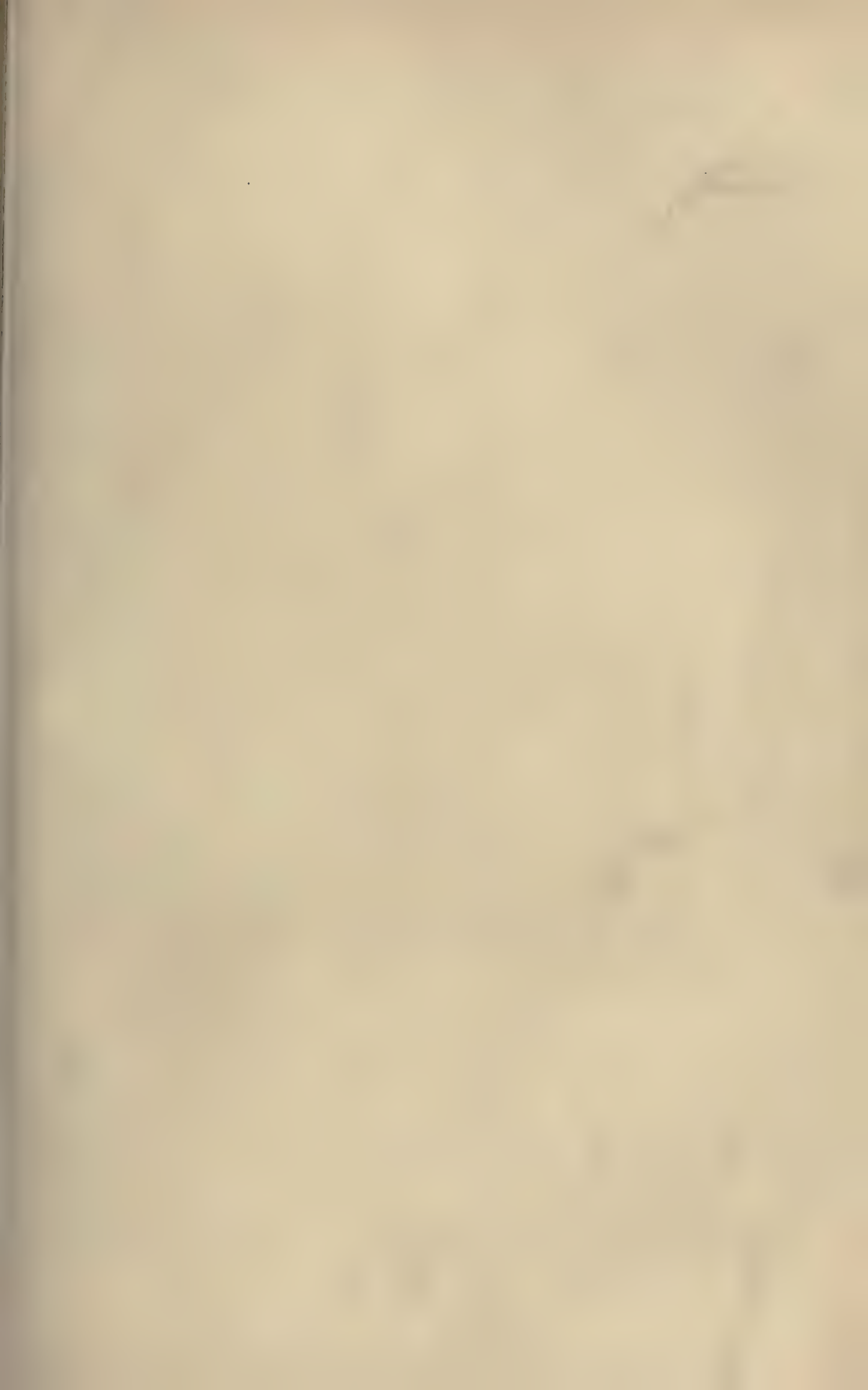
"*Treaty of Utrecht, 1713.*—Art. 13.—The island called Newfoundland, with the adjacent islands, shall from this time forward belong of right wholly to Great Britain; and to that end the town and fortress of Placentia, and whatever other places in the said island are in possession of the French, shall be yielded and given up, within seven months from the exchange of the ratifications of this treaty, or sooner, if possible, by the most Christian king, to those who have a commission from the queen of Great Britain for that purpose. Nor shall the most Christian king, his heirs and successors, or any of their subjects, at any time hereafter, lay claim to any right to the said island or islands, or to any part of it, or them. Moreover, it shall not be lawful for the subjects of France to fortify any place in the said island of Newfoundland, or to erect any buildings there, besides stages made of boards, and huts necessary and usual for drying fish; or to resort to the said island beyond the time necessary for fishing and drying of fish. But it shall be allowed to the subjects of France to catch fish, and to dry them on land, in that part only, and in no other besides that, of the said island of Newfoundland, which stretches from the place called Cape Bonavista to the northern point of the said island, and from thence running down by the western side, reaches as far as the place called Point Riche. But the island called Cape Breton as also all others,

both in the mouth of the river St. Lawrence, and in the gulf of the same name, shall hereafter belong of right to the French; and the most Christian king shall have all manner of liberty to fortify any place or places there."

"*Treaty of Paris, 1763.*—Art. 5.—The subjects of France shall have the liberty of fishing and drying, on a part of the coasts of the island of Newfoundland, such as it is specified in the 13th article of the treaty of Utrecht: which article is renewed and confirmed by the present treaty (except what relates to the island of Cape Breton, as well as to the other islands and coasts in the mouth and in the Gulf of St. Lawrence;) and his Britannic majesty consents to leave to the subjects of the most Christian king the liberty of fishing in the Gulf of St. Lawrence, on condition that the subjects of France do not exercise the said fishery but at the distance of three leagues from all the coasts belonging to Great Britain, as well those of the continent as those of the islands situated in the said Gulf of St. Lawrence. And as to what relates to the fishery on the coasts of the island of Cape Breton out of the said gulf, the subjects of the most Christian king shall not be permitted to exercise the said fishery but at the distance of fifteen leagues from the coasts of the island of Cape Breton; and the fishery on the coasts of Nova Scotia or Acadia, and everywhere else out of the said gulf, shall remain on the foot of former treaties."

"Art. 6.—The King of Great Britain cedes the islands of St. Pierre and Miquelon, in full right, to his most Christian majesty, to serve as a shelter to the French fishermen: and his said most Christian majesty engages not to fortify the said islands; to erect no buildings upon them, but merely for the convenience of the fishery, and to keep upon them a guard of fifty men only for the police."

In 1763, the coast of Labrador was annexed to the government of Newfoundland. Whales and seals were at that time the chief objects of pursuit on the coast; the trade was carried on by sloops and schooners from British America, and yielded a very valuable produce. In 1764, captain, afterwards Sir Hugh Palliser, was sent out as governor, and a collector and comptroller of customs, established at St. John's, and in the following year the navigation laws were extended to Newfoundland, notwithstanding the opposition made by the merchants and fishing adventurers. Sir Hugh, by his energy and love of justice, did much for the colony, and greatly ameliorated the condition of the poor fishermen, whose rights he strenuously maintained. By his advice an act was passed, commonly called "Sir Hugh Palliser's Act," by which the masters of vessels are compelled, under a heavy penalty, to secure the return of the seamen to England, and to pay them in money instead of in articles of supply. Newfoundland was increasing in population and importance, when it received a severe check from the revolt of the American colonies, who having renounced all commer-





SIR FRANCIS DRAKE

OB 1596

FROM THE ORIGINAL IN THE COLLECTION OF
THE MOST NOBLE THE MARQUIS OF LOTHIAN

cial intercourse with the mother country, were, after some discussion, excluded from the fisheries. These colonies then furnished Newfoundland with produce to the amount of £350,000 annually, and it was supposed that this intercourse being still left open to them, they would, without doubt, continue to avail themselves of the large profits which it afforded. This, however, was not the case, their exports were discontinued, and the people of Newfoundland were saved from starvation only by the most strenuous exertions on the part of Britain. Large supplies of food were sent out, and liberal bounties granted to the fisheries. A law passed in 1775, allowed £40 to the first twenty-five ships, £20 to the next hundred, and £10 to the second hundred, which should land a cargo of fish in Newfoundland before the 15th July, and proceed to the banks for a second lading. In 1778, a treaty offensive and defensive between France and the United States was concluded, upon which vice-admiral Montague took possession of St. Pierre and Miquelon, and sent to France 1932 French, whom he found residing there. In 1783, peace was for a brief interval again restored; the following extracts from the treaty of Versailles show the terms agreed upon between the kings of England and France, with regard to Newfoundland and the fisheries:—

Treaty of Versailles, 1783.—Art. 4. "His Majesty the King of Great Britain, is maintained in his right to the island of Newfoundland, and to the adjacent islands, as the whole were assured to him by the thirteenth article of the treaty of Utrecht; excepting the islands of St. Pierre and Miquelon, which are ceded in full right, by the present treaty, to His most Christian Majesty."

Art. 5. "His Majesty the most Christian King, in order to prevent the quarrels which have hitherto arisen between the two nations of England and France, consents to renounce the right of fishing, which belongs to him in virtue of the aforesaid article of the treaty of Utrecht, from Cape Bonavista to Cape St. John, situated on the eastern coast of Newfoundland, in 50° North lat.; and his Majesty the King of Great Britain consents, on his part, that the fishery assigned to the subjects of his most Christian Majesty, beginning at the said Cape St. John, passing to the north, and descending by the western coast of the island of Newfoundland, shall extend to the place called Cape Ray, situated in 47° 50' lat. The French fishermen shall enjoy the fishery which is assigned to them by the present article, as they had the right to enjoy that which was assigned to them by the treaty of Utrecht."

Art. 6. "With regard to the fishery in the Gulf of St. Lawrence, the French shall continue to exercise it, conformably to the fifth article of the treaty of Paris."

Declaration of his Britannic Majesty.—1. "The King having entirely agreed with his most Christian Majesty upon the articles of the definite treaty, will

seek every means which shall not only insure the execution thereof, with his accustomed good faith and punctuality, but will beside give, on his part, all possible efficacy to the principles which shall prevent even the least foundation of dispute for the future. To this end, and in order that the fishermen of the two nations may not give cause for daily quarrels, his Britannic Majesty will take the most positive measures for preventing his subjects from interrupting, in any manner, by their competition, the fishery of the French, during the temporary exercise of it which is granted to them upon the coasts of the island of Newfoundland; and he will for this purpose cause the fixed settlements, which shall be formed there, to be removed. His Britannic Majesty will give orders that the French fishermen be not incommoded in cutting the wood necessary for the repair of their scaffolds, huts, and fishing vessels."

"The thirteenth article of the treaty of Utrecht, and the method of carrying on the fishery, which has at all times been acknowledged, shall be the plan upon which the fishery shall be carried on there: it shall not be deviated from by either party; the French fishermen building only their scaffolds, confining themselves to the repair of their fishing-vessels, and not wintering there; the subjects of his Britannic Majesty on their part, not molesting in any manner the French fishermen during their fishing, nor injuring their scaffolds during their absence."

"The King of Great Britain, in ceding the islands of St. Pierre and Miquelon to France, regards them as ceded for the purpose of serving as a real shelter to the French fishermen, and in full confidence that these possessions will not become an object of jealousy between the two nations; and that the fishery between the said islands and that of Newfoundland shall be limited to the middle of the channel."

"MANCHESTER."

"Given at Versailles, the 3rd September, 1783."

Counter Declaration of his most Christian Majesty.

—"The principles which have guided the King in the whole course of the negotiations which preceded the re-establishment of peace must have convinced the King of Great Britain that his Majesty has had no other design than to render it solid and lasting, by preventing as much as possible, in the four quarters of the world, every subject of discussion and quarrel."

"The King of Great Britain undoubtedly places too much confidence in the uprightness of his Majesty's intentions, not to rely upon his constant attention to prevent the islands of St. Pierre and Miquelon from becoming an object of jealousy between the two nations."

"As to the fishery on the coasts of Newfoundland, which has been the object of the new arrangements settled by the two sovereigns upon this matter, it is sufficiently ascertained by the fifth article of the treaty of peace signed this day, and by the declaration likewise delivered to-day by his Britannic Majesty's Ambassador Extraordinary and Plenipotentiary; and his Majesty declares that he is fully satisfied on this head."

"In regard to the fishery between the island of Newfoundland, and those of St. Pierre and Miquelon, it is not to be carried on by either party but to the middle of the channel; and his Majesty will give the most positive orders that the French fishermen shall not go beyond this line. His Majesty is firmly persuaded that the King of Great Britain will give like orders to the English fishermen."

"Given at Versailles, the 3rd September, 1783."

The rights of fishing conceded to the citizens of the United States are clearly specified in the accompanying extract :—

Treaty of 1783.—Art. 3. "It is agreed that the people of the United States shall continue to enjoy unmolested the right to take fish of every kind on the Grand Bank, and all other Banks of Newfoundland, also in the Gulf of St. Lawrence, and at all other places in the sea, where the inhabitants of both countries used at any time heretofore to fish; and also that the inhabitants of the United States shall have liberty to take fish of any kind on such part of the coast of Newfoundland as British fishermen shall use (but not to dry and cure the same on that island), and also in bays and creeks of all other of his Britannic Majesty's dominions in America; and that the American fishermen shall have liberty to dry and cure fish in any of the unsettled bays, harbours, and creeks of Nova Scotia, Magdalen Islands, and Labrador, so long as the same shall remain unsettled; but so soon as the same or either of them shall be settled, it shall not be lawful for the said fishermen to cure and dry fish at such settlements without a previous agreement for that purpose with the inhabitants, proprietors, or possessors of that ground."

In 1785 the resident population of Newfoundland, amounted to 10,244, who had 8,034 acres of land under cultivation, but this increase in numbers, and civilization, only made more evident the inefficiency of the existing system of government, to restrain disorders, redress grievances, and settle the questions respecting the rights to landed property and ship-room, concerning which memorials were continually sent to England. In 1789, admiral Milbanke was appointed governor, with authority to form a Court of Common Pleas, which, however, failed to produce the desired effect, and in 1792 a Supreme Court of Judicature was established, with surrogate courts in the principal districts, John Reeves, Esq. being sent out as chief justice. War was again declared between England and France, but this time Newfoundland, instead of suffering thereby, received much benefit. The British squadron was not only sufficiently strong to protect the fisheries, but also to exclude the other European nations, while the United States had not then the power of entering into any formidable rivalry. In 1814, the exports are said to have risen to £2,831,528. In the same year peace was concluded, and the British government (or rather Lord Castlereagh), notwithstanding the urgent remonstrance of the merchants and others connected with the trade, conceded to France the same privileges which she had possessed previous to the war, by virtue of the following article in the treaty of Paris :—

Treaty of Paris, 1814.—Art. 8.—"His Britannic majesty, stipulating for himself and his allies, engages to restore to his most Christian majesty, within the term which shall be hereafter fixed, the colonies, fisheries, factories, and establishments of every kind which were possessed by France on the 1st of January, 1792, in the seas, and on the continents of America, Africa, and Asia, with exception, however, of the islands of Tobago and St. Lucie, and the Isle of France and its dependencies, especially Rodrigues and Les Sechelles, which several colonies and possessions his most Christian majesty cedes in full right and sovereignty to his Britannic majesty, and also the portion of St. Domingo ceded to France by the treaty of Basle, and which his most Christian majesty restores in full right and sovereignty to his Catholic majesty."

Art. 13.—"The French right of fishery upon the Great Bank of Newfoundland, upon the coasts of the island of that name, and of those adjacent islands in the St. Lawrence, shall be replaced upon the footing in which it stood in 1792."

In virtue of this treaty, the French set up an *exclusive* right of fishing on that part of the coast, where they only possessed a *concurrent* privilege.

Newfoundland suffered a serious diminution, both in the quantity of fish secured, and the price obtained for it, by the severe competition to which the British were immediately subjected, and the contest was rendered very unequal by the large bounties with which the French government supported their subjects, and the encouragement given them in supplying foreign markets. In February, 1816, the capital, St. John, was almost destroyed by fire, and the inhabitants were reduced to extreme distress, relieved only by the prompt assistance of the neighbouring colonies, and of the citizens of Boston, in the United States, by whom they were gratuitously supplied with food. The loss is said to have amounted to upwards of £100,000, and 1,500 people were driven, in the most inclement season of a Newfoundland winter, to seek refuge on board the shipping in the harbour, and failing that, to find shelter where they could. But the misery of the unfortunate people, rendered the more acute by the brief season of high prosperity which they had enjoyed during the war, had not yet reached the climax. On the 7th of November, in the following year, another calamitous fire broke out in St. John's, by which thirteen merchants' establishments and 140 dwelling-houses were totally consumed. The value of the property thus destroyed (including large supplies of provisions and goods) was estimated at £500,000, and on the 21st of the same month, another fire burnt 56 of the remaining houses down to the ground.

The winter of 1818 is said to have been most unusually severe, and in the midst of it Admiral Pickmore, the first naval officer who had been directed to remain on the island during the winter season, expired, being the first of a long succession of administrators, for a period of sixty-eight years, who died in the colony. In the convention with the United States, negotiated during this year, the opportunity was taken not only of confirming but of extending the stipulations with regard to the fisheries, contained in the former treaty. "Whereas," says the convention, "differences have arisen respecting the liberty claimed by the United States for the inhabitants thereof, to take, dry, and cure fish on certain coasts, bays, harbours, and creeks of his Britannic Majesty's dominions in America: it is agreed between the single contracting parties, that the inhabitants of the said United States shall have *for ever*, in connection with the subjects of his Britannic Majesty, the liberty to take fish of every kind on that part of the southern coast of Newfoundland which extends from Cape Ray to the Quiperon Islands, on the shores of Magdalen Islands, and also on the coasts, bays, harbours, and creeks, from Mount Joly, on the southern coast of Labrador, to and through the Straits of Belleisle, and thence northwardly, indefinitely along the coast, without prejudice, however, to any of the exclusive rights of the Hudson's Bay Company."

Admiral Pickmore was succeeded by Sir Charles Hamilton as resident governor, the cod and seal fisheries became less depressed, and a brighter era again dawned upon the colony; but the system of legal jurisprudence was still far from giving satisfaction, and in 1824 a bill passed the imperial government by which the island was divided into three districts, in each of which a court was annually to be held. A chief and two puisne judges, a sheriff, and other law officers were appointed. In 1830 the Chamber of Commerce at St. John's sent a vessel to try the *exclusive* right claimed by the French to fish on the western coast, from Cape St. John to Cape Ray, on our own island. The commander of the vessel sailed to St. Croque, was warned off by the commander of a French schooner mounting 16 guns, and a 32-gun frigate. The following is an abstract of the report of the English commander respecting his mission; the report itself was transmitted officially to the British government, but no steps have been taken to secure at least the

concurrent right of fishing to which the English are entitled. Commander Sweetland on arriving in St. Croque harbour states as follows:—

"Sent two boats fishing, which were driven from their anchorage by French boats dispatched for the purpose by Captain Deloram. They did not attempt to injure the men, but merely weighed their anchors, and ordered them to leave the coast, threatening, if they persisted in fishing, to cut them adrift, and force them to quit. Same day came in the French naval schooner *Philomele*, of 16 guns, commanded by Monsieur Lavoe, and anchored some little distance below us. She had not been at anchor many minutes, when the commander came on board to inquire my business. On being told I came to fish, said I must depart. In reply, stated that I came to assert my right as a British subject to fish there, and that nothing short of force would compel me to leave the port. He would see the captains, and send for me in the evening. Sent for accordingly, and I went on board the *Philomele*, when I met Monsieur Sayers, who had a fishing establishment at Croque. He asserted the exclusive right of the French to that part of the coast assigned them by treaty. I as strenuously insisted on my right, as a British subject, to fish there in common with them, as well as the Americans. This latter remark drew forth from Captain Lavoe first the minister's instructions on the subject of the American fishery on the north-west coast of the island. Denied their right, and were ordered to prevent them by every possible means. His instructions respecting the English fishermen were next produced. Instructed the French commanders not to permit the ingress of British fishermen more than was necessary for the protection or repair of their property in the winter, or during the absence of the French. That, according to their construction of the treaty, they had an exclusive right to the fishery on that coast, or that part of the island set apart to their use; therefore they were to be particular with those tolerated by the merchant captains, and to make them understand that they were suffered to reside amongst them, and to fish, not as a matter of right, but as an act of courtesy: and with regard to all other British subjects, they were, by every means in their power, to prevent their acquiring a right to fish on the coast; and in the execution of the instructions on that head, they were to be governed by the instructions relative to the Americans, viz. not to use compulsion in the first instance, but a gentle opposition, and an intimation to depart, which hitherto had been found sufficient; but if the parties were obstinate, then force was to be resorted to, in order to effect their departure.

"He then went into instructions relative to a salmon fishery at Cod Roy, in which a merchant of the name of Hunt was interested. That his men were in possession of it, and, although within the limits of the French coast, maintained themselves in their post by beating off the crew of a French vessel, sent expressly from France to possess themselves of it the previous year. That, since seeing me in the morning, he had seen the captains, who were unanimous in their determination to prevent my crew from fishing, and therefore he could not sanction my doing so: that I was not to attempt it again. That he should not attempt to remove me from the harbour; that I might remain as long as I pleased: he could not be so uncivil to any Englishman who

came in his way. Was particular in expressing his opinion that I had not any right, and that they were determined to prevent any boats from fishing, as often as they attempted it.

"I of course desisted from any further effort, but waited on the commander of the *Philomèle*, with my protests against Monsieur Deloram and others who had opposed me. He declined receiving them, and read the copy of a letter which he had addressed to the senior captains, directing them to prevent the *Hannah's* crew from fishing at Croque, or any other part in the French shore.

"The number of ships employed this season by the French in this fishery were 266 in all, viz.—From Grainville, 116; St. Maloe, 110; Pampol and Ben-nick, 30; Havre, 4; Nantz, 6. Total, 266 from 100 to 350 tons burthen, having 51 men and boys each, amounting in the whole to 13,566, one-tenth portion of whom were boys. This number surpassed considerably the governor's estimate, a very good reason for which was assigned to me by the French gentleman from whom I received the information. Each establishment had two, some four cod seina, from 16 to 30 fathoms deep, and 200 fathoms long. Their capelin seina were from 21 feet to 50 in depth: two were held by each establishment. The cost of a cod sein crew amounted for the season to 6,000 livres, and the catch thereof to 1,200 quintals.

"From the numerous interviews I had with the merchants and the naval commanders, it was apparent that they considered the cod fishery on that coast as their own, and that they would not consent to any competition, unless an equivalent were granted them: hence the orders issued by the ministers, the copy of which, handed me by the commodore, was similar to that displayed by Captain Lavois:—viz. *That the Americans were to be driven from the coast, and the British not to be countenanced in greater numbers than were necessary for the security of the French property in the winter.* The absolute right of salmon fishery did not appear to be so strenuously insisted on as that of the cod; indeed, from the contest at Cod Roy, immediately within their own limits, and the evasive reply of the commodore on the question respecting it, together with other circumstances, it did not appear to me, that they considered they had any right to the brooks, or the shores of the harbours, other than that of catching and curing cod fish thereon.

"To the soil they had not any claim, further than that portion necessary for the purposes of their fishery. To insure sufficient space for that purpose they have invariably selected the best and most capacious situations in each harbour, and by occupying the whole front, preclude the possibility of any other person approaching the situation selected for this scene of their business.

"The coast abounds with timber of very excellent description for the purposes of the fishery. The land is good, for the most part producing every species of grass spontaneously, and in great abundance, free from bogs, and not a rush to be found on it or any portion of it. Indeed I could not discover any that could be deemed marshy, or at all approaching to it.

"A long period has since elapsed without any benefit resulting to this community, as the fruit of the expedition, which was sent forth at some considerable expense to the merchants at St. John's.

(Signed) "WM. SWEETLAND."

The practical effect of the claims enforced

by the French of *exclusive* rights on our coast, and which as justly may be claimed on the coast of Sussex, is the virtual cession of the larger and better half of Newfoundland to France. So strong were the national feelings at one period respecting the value of the British fisheries, that—

"The Act of 10th and 11th William and Mary, declares the trade and fisheries of Newfoundland a beneficial trade to the kingdom, in the employment of a great number of seamen and ships, to the increase of her majesty's revenue and the encouragement of trade and navigation.

"The same parliament came to a resolution, 'that the trade of Newfoundland doth very much promote navigation, increase seamen, and is of great profit to the nation.'

"The privilege of fishing ceded to the French by the Treaty of Utrecht was loudly condemned; it formed one of the principal grounds of impeachment against the Earl of Oxford, 'that he, the said Robert, Earl of Oxford, and Earl Mortimer, in defiance of the express provisions of an Act of Parliament, as well as in contempt of the frequent and earnest representations of the merchants of Great Britain, and of commissioners of trade and plantations, did advise his majesty finally to agree with France that the subjects of France should have liberty of fishing, and drying fish in Newfoundland.'

"The committee of secrecy, in 1715, on the Treaty of Utrecht, reported, 'What was really of most importance to England was the 8th Article, which relates to Hudson's Bay and Newfoundland; but the ministry suffered themselves to be grossly imposed upon in the article that they directly gave to France all they wanted, which was the liberty of taking and drying fish in Newfoundland. And as the acceptance of this amendment was to put an end to all the differences, and, at the same time, give such ample advantages to France, the French readily agreed to it, and did insert the article verbatim as it was sent in the treaty of commerce, which makes the 9th article as it stands; and is the same which was requested by the last parliament. This article, which has since been so universally and justly condemned, appears to be the work of the English ministry, and the price for which they sold to France the fishery of Newfoundland.'

Mr. Pitt declared, in the House of Commons, that no exclusive rights had been granted to the French. "*The fishery*," said he, in reference to the claim of Spain, "*is a point we should not dare to yield though the Spaniards were masters of the Tower of London!*" The present excellent governor, Sir G. Le Marchant, reports that, by means of the French proceedings, "*the British Bank fishery has ceased to exist.*"

The subjects of the crown in Newfoundland feeling deeply the importance of the matter, have again brought it under the consideration of the colonial legislature, and a committee of the House of Assembly have in consequence made the following report thereon:—

The Newfoundland Fisheries.—"The Bank and Shore Fisheries have engaged the deep attention of your committee. These important subjects have not hitherto been investigated by the legislature; they have therefore considered it their duty to take a general review of them from the earliest period. These fisheries are coeval with the colonial dominion and maritime superiority of England. Newfoundland was her earliest colonial possession; the fisheries, the first nursery of those seamen that gained for her the dominion of the ocean, and with it her vast, unbounded colonial empire, and the trade of the world.

"Soon after the discovery of the island by Cabot, in the reign of Henry VII., the fisheries gave employment to a considerable number of ships and seamen. As far back as the year 1549, an Act of the British Parliament (Edward VI.) was passed for the better encouragement of the fisheries of Newfoundland. During the reigns of Elizabeth, James I., Charles I. and II., the trade and fisheries engaged much of the attention of the Crown and Parliament. There were two hundred and sixty ships employed in the Newfoundland fisheries in the reign of Elizabeth. The seamen nursed in these fisheries mainly assisted in manning her fleets, which defeated the powerful Armada of Spain.

"Charles I., in a commission for well-governing his subjects of Newfoundland, observes, 'the navigation and mariners of the realm have been much increased by the Newfoundland fisheries.' Various Acts were passed in the reign of Charles II., and measures were adopted to revive the fisheries of Newfoundland, which had greatly declined. The preamble of the Act 10th and 11th William and Mary declares, that 'the trade and fisheries of Newfoundland is a beneficial trade to the kingdom, in the employing of a great number of seamen and ships, to the increase of Her Majesty's revenue, and the encouragement of trade and navigation.'

"The Act 15th George III. declares the fisheries to be 'best nurseries for able and experienced seamen, always ready to man the Royal Navy when occasion may require; and it is of the greatest national importance to give all due encouragement to the said fisheries.'

"In 1763, Lord Chatham, then Mr. Pitt, negotiated in the first instance the treaty of Paris, which upon his resignation of office was concluded by Lord Bute. Lord Chatham, who had contended on the part of England for the whole exclusive fishery of Newfoundland, and affirmed it to be of itself an object worthy to be contested by the extremity of war, censured severely his successor in office, for having returned to France some of the privileges which she had before enjoyed upon the coast, and for having ceded, in addition, St. Pierre and Miquelon.

"By the Treaty of 1763, additional concessions were made to France in the fisheries of Newfoundland. No part of the treaty was more uniformly censured than that which related to Newfoundland. The preliminary articles were censured by a vote in the House of Commons, and the ministry of the day had to retire: however, the advantages ceded to the French were confirmed. Lord Viscount Townshend said, 'The admission of that nation (the French) to a participation of the Newfoundland fisheries, was a piece of the most dreadful policy and concession that ever disgraced a nation.' Mr. Fox said, 'it was evident that our fisheries in Newfoundland, so much boasted of, were in a manner annihilated, not to men-

tion the impolicy of ceding St. Pierre and Miquelon.' Sir Peter Burrell said, 'Will any gentleman say that leaving the Americans liberty to dry their fish on the unsettled coast of Newfoundland was the way to prevent disputes?' For his part, he saw, in the wording of the treaty, an eternal source of quarrels and disputes; and when he considered the footing on which the Americans are with the French, he was not without his apprehensions, that the right which the treaty granted to the latter to dry their fish on a coast near 190 miles in length, would occasion various attempts to bring in the Americans to this privilege.' Lord Mulgrave on the same occasion, said, 'he considered the Greenland fisheries much inferior to the Newfoundland fisheries.' Mr. Pitt expressed similar opinions.

"The great advantages in a national point of view, of the Newfoundland fisheries, have been fully admitted by the most eminent statesmen of a later period. On a motion proposed by Sir John Newport, in 1815, in which he expressed his views of the vast importance of the fisheries of Newfoundland, Lord Castlereagh said, 'he concurred with much of what had been said by the right hon. Baronet as to the value of the fisheries; he most completely coincided with him, that they were not only valuable as a great source of wealth to the country, but they were still more so as a source of maritime strength.'

"The greatest of trade ministers, the late lamented Mr. Huskisson, in his celebrated speeches upon the shipping interest, colonial trade and navigation, never lost sight of the great importance of the fisheries. To the support of them, as a great source of the maritime power of England, he assented to a deviation from the great leading principles of his own commercial system. In that eminent statesman's speech on the Navigation Laws of the United Kingdom, he says—

"'The ocean is a common field, alike open to all the people of the earth; its productions belong to no particular nation. It was therefore our interest to take care that so much of those productions as might be wanted for the consumption of Great Britain, should be exclusively procured by British industry, and imported in British ships. This is so simple and so reasonable a rule, that in this part of our navigation system no alteration whatever has been made, nor do I believe that any ever will be contemplated.' Sir Howard Douglas said that 'the fisheries in the British quarters of America were the most productive in the world; if they were not ours, whose would they be? What would be the effect of the total abandonment and transfer to another power of this branch of industry, upon our commercial marine, and consequently upon our naval ascendancy?'

"Your committee could, without end, produce authorities, both British and Foreign, to prove the inestimable value of the fisheries on the Great Bank and shores of Newfoundland. The French government have at all periods duly estimated its importance. The Americans, even before they were separated from the government of the parent country, but more particularly since, have lost no opportunity to extend the Fisheries in the gulf of St. Lawrence, and on the banks and shores of Newfoundland. Your committee would conclude upon this head by referring to the opinion of a celebrated French authority (L'Abbé Raynal on the great value, in a commercial and national point of view, of the Newfoundland fisheries:

"'The Colonies,' he says, 'have exhibited a series of injustice, oppression, and carnage, which will for ever be holden in detestation. Newfoundland alone

hath not offended against humanity, nor injured the rights of any other people. The other settlements have yielded productions only by receiving an equal value in exchange. Newfoundland alone hath drawn from the depths of the waters riches formed by nature alone, and which furnish subsistence to several countries of both hemispheres. How much time hath elapsed before this parallel hath been made,—of what importance did fish appear when compared with the money which men went in search of in the New World? It was long before it was understood, if even it be yet understood, that the representation of the thing is not of greater value than the thing itself, and that a ship filled with cod and a galleon are vessels equally laden with gold;—there is even this remarkable difference, that mines can be exhausted, and the fisheries never are. Gold is not reproductive, but the fish are so incessantly.

"Your committee consider it necessary to explain the grounds on which they refer to so many authorities to 'prove the value of the Newfoundland fisheries. The proposition, as far as they could learn, has never yet been questioned. They were induced to make these references in consequence of the utter neglect with which these fisheries have been regarded by the British government since the peace of 1814, on the one hand, and the avidity with which they were prosecuted by the French and American governments, on the other. 'Great Britain, who owns, supports, and defends these colonies and fisheries, and has derived from them the principal means of defending herself, gave up at the conclusion of the war, to her vanquished opponents, the most valuable portions of her coasts and waters. To the French, in 1814, she conceded the north coast and western coast of Newfoundland, from Cape St. John to Cape Ray; to the Americans, in 1818, she gave up the right of taking fish on the southern and western coast of the same island, from the Rameau islands to Cape Ray, and from Cape Ray to the Quirpon islands, to the Magdalen islands, and on the whole coast of Labrador, from Mount Jolly northwards, to the limits of Hudson's Bay, together with the liberty of using the unsettled parts of Labrador and Newfoundland for drying and curing fish.' It cannot be questioned that Great Britain, by these concessions, ceded to the French and the Americans the best fishing-grounds; and these governments, to make the most of the advantages, grant large bounties for the encouragement of these fisheries, with the avowed purpose of increasing their maritime strength. Your committee may therefore state that the Newfoundland fisheries, instead of being, in the words of the British Act of Parliament, a nursery for seamen to man the British navy when occasion should require, have become converted into the best nurseries both for the French and American navies.

"The Deep-Sea fishery on the Grand Bank and other Banks can only be prosecuted in crafts and vessels of a large size, and with an expensive outfit. The French and Americans, by their bounties, are enabled to prosecute them to advantage; while every attempt of the British has proved a failure, arising, not from want of skill or enterprise on their parts, but altogether from the advantage enjoyed in the form of bounties by their foreign rivals. The unequal competition has swept the British ships from that fishery; it is now monopolised by French and Americans, and without a rival. As the Newfoundland fisheries are now comprised of that portion carried on by the British, that by the French, and that

by the Americans, your committee will give an abstract of each fishery, founded on such information, official and otherwise, as they could obtain.

"1st. *The British Fisheries.*—In 1615, Captain R. Whitbourne represents the British fisheries as employing 260 ships, averaging about 60 tons, and 20 mariners to each ship—in all, 16,000 tons of shipping, 5,000 seamen, and 1,260 fishing-boats. In 1644, in a representation made, the fishery was represented to consist of 270 sail of ships, computed at 80 tons each, and for every 80 tons, 50 men—in all, 21,600 tons, and 10,800 seamen. In the reign of Charles II. the British fishery greatly declined, and the French fishery advanced in proportion. In 1677, the British fishery is represented to consist of 109 ships, 4,475 seamen, and 892 boats, with 337 belonging to bye boat-keepers. In 1684, owing to the same cause (the French competition) the British fishery was reduced to 43 fishing-ships, 1,409 seamen, and 294 boats, with 304 boats belonging to resident boat-keepers.—The extraordinary falling off of the fishery at this period is thus explained by the Lords of the Privy Council of Trade in 1718:—

"'But this decay of the fishery trade was not the only loss the kingdom sustained on this occasion; for, as Captain Jones, one of the commodores of the convoy in 1682, hath affirmed of his own knowledge, the traders from New England to Newfoundland yearly made voyages for the sake of spiriting away the fishermen, so that the Newfoundland fishery, which was formerly the great nursery for breeding up stout and able mariners, was now become a mere drain that carried off very many of the best and most useful of all the British sailors; and it is too notorious that this practice has prevailed ever since.'

"The state of the British fishery from 1699 to 1726 exhibits the same rise and fall, as will appear by the following recapitulation:—

Average of years.	No. of Ships.	Burthen of Ships.	No. of Men.	No. of Passengers.	No. of Boats.
1699, 1700, 1701	192	7,991	4,026	...	1,314
1714, 1715, 1716	161	9,193	2,119	...	982
1749, 1750, 1751	283	33,512	4,103	3,149	1,370
1764-5-6-7-8-9,	516	40,691	5,435	6,441	2,163
1770-1-2-3-4 }	480	48,950	4,422	4,617	2,258
1784-5-6-7-8-9,					
1790-1-2 . . }					

Average of years.	Quintals of Fish made.	Quintals of Fish carried to market.	Tierces of Salmon carried to market.	Tuns of Train Oil made.	No. of Inhabitants.
1699, 1700, 1701	216,320	154,370	...	1,049	3,506
1714, 1715, 1716	97,730	102,363	...	891	3,501
1749, 1750, 1751	432,318	422,116	1,308	2,532	5,855
1764-5-6-7-8-9,	626,276	524,296	5,146	2,882	12,340
1770-1-2-3-4 }	637,955	622,108	2,974	2,364	15,253
1784-5-6-7-8-9,					
1790-1-2 . . }					

Office of the Committee of Privy Council for Trade,
Whitehall, 19th March, 1845.

"The occasional decline of the British fisheries appears to be accounted for by a variety of causes. The true causes—French and American competition, and large bounties—are scarcely noticed. It was confidently stated that it was owing to the resident population not exceeding in those days from five to

ten thousand. A report of the Lords of the Privy Council of Trade states, in 1718, that the indulgence shown to the planters in 1677, by permitting them to remain in the country, rendered the charter ineffectual, reduced the fishery to the lowest ebb, and favoured both the French and New Englanders in carrying on the fishing-trade. The same report, in further accounting for the decline of the British fisheries, attributed it mainly to the neglect in enforcing the 10th article of the charter of Charles I., which ordains—

“That no person shall set up any tavern for selling of wine, beer, &c., to entertain the fishermen, &c.; and it is as certain that the flourishing state of the fishery trade during the aforesaid period was, in a great measure, owing to this wholesome prohibition; for as long as it was maintained, so long the trade prospered, and it was no sooner dispensed with than the trade sensibly declined; and although the planters were afterwards kept in awe for some time by the charters that were granted by King Charles II., which confirmed the same prohibition, nevertheless, when that difficulty was surmounted, and they were at liberty to pursue their own measures, the fishery immediately languished.”

“The true causes of the falling-off of the British fishery may be attributed to the unequal competition with which it had to contend from foreigners, their fisheries on the Newfoundland coast having been invariably supported by large bounties and other encouragements. It can be much more satisfactorily accounted for in that way than to attribute it to the settlement of the island, a resident population, or even to the establishment of taverns and public-houses.”

“A subsequent report of the lords of the committee of the Privy Council of Trade, on the subject of the Newfoundland fishery, dated 17th March, 1786, accounts for it in a much more satisfactory manner when they state—

“The French give a bounty upon fish, the produce of their fishery, imported into their West India islands, of ten *lires* per quintal, and at the same time lay a duty of five *lires* per quintal upon all fish imported into those islands by foreign nations. This bounty and duty taken together is equal to a prohibition of foreign fish; and it is a clear proof that, even in the opinion of their own government, nothing less than an encouragement more than equal to the first cost of their fish, can enable their fishery to have a share of their own markets in the West Indies.

“The French also give a bounty of five *lires* per quintal upon all fish, the produce of their fishery, carried into Spain, Portugal, and Italy. This bounty is also so extravagant as clearly to evince the opinion of the French government of the low state of their fishery. If the legislature here was to give a like bounty upon the fish of your majesty's subjects carried to those markets, it would amount to £120,000 per annum. Such a measure can therefore be calculated merely to introduce their fish into those markets, but can never be intended as a permanent encouragement.”

“Your committee wish particularly to draw attention to those opinions of the lords of the committee of the privy council of trade, to show how mistaken they were in supposing that the French intended their bounties merely as a temporary expedient. It will further appear that they have not only continued them down to the present time, but have extended the fishery thereby to an extent greater than at any former period.

“Your committee having shown that it was large bounties alone enabled the French to carry on the fishery on the coast of Newfoundland down to the period of 1793, have now briefly to remark, that from the war which broke out in that year until the year 1814, with the slight interruption of the peace of Amiens of 1802, the British had full possession of the fisheries, undisturbed by the competition of the French. During that period the fisheries greatly increased and prospered, and the quantity of fish caught ranged from 800,000 to 1,000,000 quintals per annum. It realized high prices in all the foreign markets; the price at Newfoundland advanced to the enormous sum of 45s. sterling per quintal. The estimated value of the exports—the produce of the fisheries of one or two of the last years of the war—were stated to exceed two millions and a-half sterling.

“Your committee have now to draw your attention to the violent and sudden revolution, the rapid and unparalleled decline, in the trade and fisheries, consequent upon the peace, first with France, and then with America. To the French were ceded the islands of St. Pierre and Miquelon, and the shores from Cape Ray to Cape John. To the Americans were soon after granted equally valuable fishing-grounds; and in addition, their respective governments granted enormous bounties to uphold their fisheries, equal almost to the intrinsic value of the fish. It leaves no ground to doubt the cause which brought such universal ruin, at that period, upon the British trade and fisheries. Your committee cannot better point out the cause of the great depression of the fisheries of that period, than by giving an extract from the evidence before the House of Commons in 1817. George Garland, Esq., states to the committee, (Michael Angelo Taylor, Esq., in the chair,)—that

“Another cause of the distress of trade may be found in the surrender by our government, to France, by the late treaty, of a large part of the coast of Newfoundland, which is by far the most valuable part of the whole island for the prosecution of the fishery, and to which, in consequence of the general scarcity of fish about St. John's and in Conception Bay, the inhabitants of those districts, the most populous in the island, were wont annually to resort during the whole of the fishing season, though at the distance of 200 or 300 miles. Since the cession of the French shore, the British fishermen of the said districts, confined to their own coast, have not caught above half the quantity of fish which they formerly did with the same outfit. The merchants urgently requested the government, previous to the peace, to retain this valuable part of the island; and though we do not presume to question the expediency of the sacrifice which has been made of their individual interest for the promotion of national objects, yet I would submit that it strengthens their claims to reasonable relief. And lastly, but by no means least, another cause is to be found in the growing competition of the French and Newfoundland trade, which is fostered by its government with the most anxious solicitude, freed from duties either on its ships or produce, and enormous bounties on its produce, and on the men engaged in the trade, as will appear by a document which I beg to produce.

“*French Bounties on their Newfoundland Fisheries.*—On fish exported from Newfoundland, or from France to the French colonies, 24 francs per pellétrical quintal, which is equal to 12 francs or 10s. per English quintal of 112 lbs. On fish exported from

Newfoundland to France, and from thence to Spain, Portugal, Italy, and the Levant ports, 12 francs per metrical quintal, which is equal to 6 francs, or 5s. per English quintal of 112 lbs. On fish exported from Newfoundland to Italy, Spain, and Portugal, direct, 10 francs per metrical quintal, which is equal to 5 francs, or 4s. 2d. per English quintal of 112 lbs. On every kilogramme of oil exported from Newfoundland to France, 10 centimes, which is equal to 75s. per tun, of 256 gallons English. On every kilogramme of cods' roes and eggs, from Newfoundland to France, 20 centimes, which is equal to 8s. 4d. per English quintal or cwt. Besides the above, a bounty of 50 francs, or 41s. 8d. per man is allowed to the French merchants for every man and boy employed in the French shore fishery, and 15 francs, or 12s. 6d. for every man and boy employed in the French bank fishery sailing annually from French ports.

"This competition has already excluded us from the French markets, where, in the year 1815, we disposed of 100,000 quintals fish; it has met us in the markets of Spain and Italy, although in a limited degree, owing to the recent re-establishment of the French fisheries; and it is evident that nothing but the support and assistance of our government, in some way or other, can enable us to maintain the competition much longer with rivals who receive a bounty equal to one-third of the value of the article. I have now completed the exposition of the causes of distress."

"Mr. Attwood said,—'Because it appears that the French are actually prosecuting their fishery with all the enterprise and activity that might be expected from such unlimited encouragement, notwithstanding the French fishery was so very unfortunate last year, that they were only able to supply little more than France and their own colonies with fish—I am told, on the authority of the French consul, that they have despatched more than four times the number of vessels on the fishery this year than they sent out last year. These are the grounds of my opinion, that without support from our government, or the intervention of some great political event, three-fourths of the present Newfoundland trade will go from this country into the hands of France in the space of three years.'

"The result of the representation and evidence adduced before the committee was the following report:—'It appears also to your committee that the trade itself has experienced a serious and alarming depression. The causes from which this has arisen will require, in the opinion of your committee, in the ensuing session of parliament, a much more detailed and accurate investigation; but enough has been shown by the testimony of respectable witnesses, to prove, before the House separates, that the fisheries will be most materially injured, the capitals embarked in them by degrees withdrawn, and the nursery for seamen, hitherto so justly valued, almost entirely lost.'

"Notwithstanding this strong representation on the part of a committee of the British House of Commons, the subject has not since been taken up by the government. No relief or support has been afforded from that period to the present; the British fisheries have been left to languish and contend with the unequal competition; and as it was clearly proved, by the evidence of Mr. Garland and Mr. Attwood, the great and most important portions of the most valuable of the Newfoundland fisheries have fallen into the hands of the French and Americans, and

without any rivalry on the part of the British. The British fishery is now confined to an in-shore fishery, prosecuted in punts and small craft, leaving the deep-sea fishery on the Great Bank, and the other valuable banks and fishing-grounds, altogether in the hands of the French and Americans.

"Your committee have no hesitation in stating, that if the framers of the treaties of 1814 and 1818 had agreed to exclude the British from these great fisheries, they could not more effectually have deprived them of all participation in them.

"Your committee will now briefly remark upon the state of the fisheries from the peace of 1814 down to the present period, having to contend with difficulties already noticed. Thrown altogether upon their own resources, unaided by the parent government, it must appear difficult to account for the preservation, by the British, of even a remnant of the fisheries. According to all mercantile calculation, they should have fallen into the hands of the French and Americans: however, the necessities of the large population which grew up during the period of a prosperous fishery worked for itself auxiliary means of employment. The cultivation of the soil—combining fishing and farming—has enabled them to exist in the country, and thereby to preserve the in-shore fishery, the only portion that now remains to them. They have extended that fishery, and the aggregate quantity of fish caught is equal to that of the amount of the most prosperous years.

"Your committee, in making this admission, contend that it only proves that a trade capable of holding up against difficulties that would have overwhelmed any other in her majesty's wide-extended dominions, is worthy of more attention and consideration from the parent government than has hitherto been extended towards it.

"*British Bank Fishery.*—The Great Bank Fishery suddenly declined after the treaties of 1814 and 1818. In the year 1775 it gave employment to about 400 sail of registered vessels, averaging from 80 to 140 tons burthen, employing from 8,000 to 10,000 fishermen and shoremen. As many as 140 sail was fitted out from the district of St. John's, and the remainder from the various harbours of the island. This important branch of the British fishery was extensively prosecuted during the whole of the French war. No sooner did the French regain the privilege of prosecuting the fishery, than their extensive bounties undermined the British Bank Fishery. Various attempts have been made to participate in it, but every attempt only brought ruin and disappointment on the British merchants or fishermen: the consequence is, at this time, that the great Newfoundland Bank Fishery, so valuable in a commercial, but more particularly in a national point of view, is surrendered without a struggle to the rivals of England, the French and Americans; these powers employing at least 1,000 vessels of considerable burthen, manned with not less than 30,000 seamen; the British not having more than five vessels and 50 men employed in the great deep-sea fishery on the banks of Newfoundland.

"Your committee have to draw your attention to the mode of fishing lately adopted by the French. They have adopted what is called the Bultow system, by which means they extend lines and hooks miles round the ship. For a particular and accurate description of this mode of fishing, your committee have to refer to the statements of Messrs. Mudge and Co. appended to this report. Your committee, in reference to this subject, have reason to believe that the Bultow sys-

tem of fishing is most destructive:—it is a novel mode of fishing not sanctioned by any previous practice or custom. A question may arise, whether it is not a violation of the spirit of the treaty with France. It is a subject that should, without delay, be brought under the consideration of her majesty's government.* Your committee have not sufficient data to give a particular and authentic account of the French and American fisheries prosecuted in the Gulf of St. Lawrence and on the banks and shores of Newfoundland.

French Fisheries.—It is universally admitted by all those who are acquainted with the subject, that the French occupy by far the best fishing stations. Having possession of the islands of St. Pierre and Miquelon, they can prosecute the fishery to the Grand Bank with the greatest facility. They have also what has been called the Garden of Newfoundland, the line of coast from Cape Ray to Cape John: that portion between Cape John and Straits Belle Isle secures to them the most prolific fishing-grounds; they not only have the advantage of catching a larger quantity of fish, but the climate is found, by the absence of fog, much more suitable for making and curing it, and preparing it for the foreign markets.

"The principal British fishery was carried on in that quarter during the war. To use the words of an intelligent writer on the subject—'British fishers are consequently driven to the shores of Labrador, a longer voyage, where the quality of the fish, and the means of drying and curing them, are far inferior. The north-eastern coast of Newfoundland happens to be precisely that which is most exempted from fog; the same winds which envelop other parts of the island in damp and mist, leave this portion clear and dry—a circumstance unknown, or apparently unregarded, by those who, in addition to other concessions of land and water, seem to have given away the light and heat of the sun;—the consequence is, that in the curing of our fish a great part is destroyed by fog and damp, while the French fishermen, in addition to the abundance and quality of their fish, possess and monopolise the still greater advantage of the clearest and sunniest coast.'

"Your committee have reason to believe that this exclusive fishery is a usurpation on the part of the French—that all they are entitled to by treaty is a concurrent right; at the same time it must be admitted that their exclusive claim has, in some degree, been sanctioned by the forbearance and policy of the British government.

"The extent of the French fishery of St. Pierre and Miquelon, and on the other coasts of the islands, may be estimated by a catch of 1,000,000 quintals of fish, employing upwards of 700 sail of large ships, and from 20,000 to 25,000 fishermen and seamen. The French, both of St. Pierre and Miquelon, on the northern part of the island, carry on an illicit trade with the British settlers, particularly in bait, for the supply of their bankers, which is greatly injurious to

* We copy the following account of the operations of the French fishermen on the coast of Newfoundland:—

"The vessels, it appears, mostly anchor in lat. 50° N. and long 59° 20' W. in about 45 fathoms water, veer 90 or 100 fathoms of cable, and prepare to catch cod-fish with two quarter-inch lines of 3,000 fathoms long each. On these a small cork is placed at every 12 feet, and while metal hooks baited with parts of small fish (by us called kiblings) are alternately fastened by snoods of 3 feet long, 6 feet apart, and the whole neatly coiled in half-bushel baskets clear for running out. Half the number of baskets are then placed in a strong-built lug-sail boat on each side; at three o'clock in the afternoon both make sail together at right angles

British interests, and calculated to destroy the British fisheries on the coast by depriving them of their regular supply of bait. Your committee have to draw particular attention to this point, and have to refer to the evidence appended to this report.

"In making this brief reference to the French fisheries, your committee must observe, that if the British and French fisheries were prosecuted without encouragement in the form of bounties, British industry, notwithstanding the other advantages possessed by the French, would assume its usual superiority; but it is impossible for them to compete with the French, upheld as they are by immense bounties. The object of France is not to create a trade, but to create a navy. It is forcibly said by Mr. McGregor, in his history—'In ceding to France the right of fishing on the shores of Newfoundland, from Cape John to Cape Ray, with the islands of St. Pierre and Miquelon, we gave that ambitious nation all the means that her government desires of manning a navy; and if we were determined to lay a train of circumstances which, by their operation, should sap the very vitals of our native strength, we could not more effectually have done so than by granting a full participation of those fisheries to France and America.'

American Fisheries.—Your committee, in referring to the American fisheries, have also to say that they have no data to ground a correct estimate of them; but they can state that they are very extensive, employing from 1,500 to 2,000 sail of deck vessels, averaging from 40 to 100 tons burthen. The catch of fish in the British waters has been estimated at 1,100,000 quintals, which must give employment to 25,000 fishermen and seamen. The American fishers are observed in great numbers on the Grand Bank, and on the fishing-grounds in the Gulf of St. Lawrence—all along the shores of Nova Scotia, Prince Edward's Island, Newfoundland, and the shores of Labrador. They commence their fishery early in the spring, and follow it up with the greatest assiduity to the latest period of the fall. The American fishery is encouraged by a bounty of twenty shillings per ton, and the supply of their own markets protected by a duty of five shillings per quintal on foreign fish.

"Your committee have to observe, that the great catch of fish by the Americans, supported as it is by bounties and other encouragements, operates, concurrently with the French catch and bounties, to sap the foundation of the British fishery."

There is no further historical incident requiring record, save that in 1847 the capital, St. John, was again nearly totally destroyed by fire. The following is a list of the governors of Newfoundland, which includes some of the most distinguished names in the British navy:—

from the vessel, and when the lines are all run out straight, sink them to within five feet of the bottom. *The crew having rested all night, they proceed again the next morning at daybreak to trip the sinker, and while hauling in lines, unhooking fish, &c., the men left on board heave in the other end with a winch. When in that manner 400 cod-fish are caught in a night, some are then employed line-clearing, fish-beheading, splitting, salting, and stowing them away in layers across each other below: livers and refuse boiled to oil put in large casks on deck. Three months seems to be the average time employed,—arriving early in June, and departing again in October."*

Governors.	Year.	Governors.	Year.
Capt. Osborne, R.N.	1729	Admiral Campbell	1782
" Clinton, R.N.	"	" Elliot	1786
" Vanbrugh, R.N.	1737	" Milbanke	1789
" Lord G. Graham, R.N.	1740	" King's	1793
" Hon. J. Byng, R.N.	1741	" Sir J. Wallace	1794
" Sir C. Hardy, R.N.	1744	" Waldegrave	1797
" Rodney, R.N.	1749	" Pole	1800
" Drake, R.N.	1750	" Gambier	1802
" Bonfoy, R.N.	1753	" Sir E. Gower	1804
" Dorril, R.N.	1755	" Holloway	1807
" Edwards, R.N.	1757	" Sir J. Duckworth	1810
" Webb, R.N.	1760	" Sir J. Keats	1813
" Groves, R.N.	1761	" Pickmore	1816
" Palliser, R.N.	1764	" Sir C. Hamilton	1818
" Hon. J. Byron, R.N.	1769	Capt. Sir T. Cochrane, R.N.	1825
Commodore Molyneux	1772	" Prescott, R.N.	1834
" Duff	1775	Major-General Sir J. Harvey	1841
Admiral Montague	1776	Hon. F. W. A. Bruce	1846
" Edwards	1779	Lieutenant-Colonel Sir J. G. Le Marchant	1847

CHAPTER II.

TOPOGRAPHY, GEOLOGY, MINERALOGY, SOIL, AND CLIMATE. VEGETABLE AND ANIMAL KINGDOMS.

NEWFOUNDLAND stands on an immense bank, in length about 600 miles, and in breadth about 200 miles, with soundings varying from 25 to 95 fathoms; the base being a mass of solid rock. There are apparently two banks, the outer one lying within $44^{\circ} 10'$ and $47^{\circ} 30'$ N. lat., and within $44^{\circ} 15'$ and $45^{\circ} 25'$ W. long., with soundings varying from 100 to 150 fathoms. Newfoundland is in form, nearly an equi-lateral triangle, the apex being to the northward and the base extending east and west, between Cape Ray and Cape Race. The coast is every where indented, at intervals of two or three miles, by broad and deep bays, innumerable harbours, coves, creeks, and rivers. The shores are all rocky, with pebble beaches, often covered with stunted wood nearly to the water's edge; with lofty headlands on the south-west side. The interior of the island remained unexplored until 1823, when Mr. Cormack, accompanied by some Indians, succeeded in traversing the island from east to west, viz. from Trinity Bay to St. George's Bay. From his account, the interior would appear to be rocky, with numerous tracts of moss; much intersected by rivers and lakes, and but thinly wooded, except on the banks of the rivers, where poplars, birches, and spruce firs grow. The

British settlements are almost entirely confined to the coast line; the best manner of conveying an idea of their relative positions, and of the country generally, or at least of the limited portion with which we are acquainted will therefore be by passing regularly round, examining by the way the chief bays, harbours, &c., commencing with the large peninsula, named Avalon, which constitutes the south-eastern portion of the island, and on which St. John's, the capital, is situated. The deep bays of Trinity and Placentia, form the peninsula, and are separated only by an isthmus about three miles broad. Two other considerable bays, those of St. Mary and Conception, run parallel with these, and dividing the peninsula into three lesser ones, give Avalon a very unusual proportion of water frontage, which from its proximity to the Great Bank, is of great value, and adds materially to the importance attached to it, from its situation with regard to Europe.

St. John is situated on the open eastern coast, in $47^{\circ} 33' 33''$ N. lat., and $52^{\circ} 45' 10''$ W. long. The harbour is spacious and secure, every where excepting towards its termination of great depth, having upwards of 90 feet in the centre, and land-locked by high hills, which on its south side afford no

shore, and on its north admit a strand, built over with warehouses and wharfs. The remarkable entrance, called the Narrows, is thus described by Sir R. Bonnycastle:—"The ship, passing the open roadstead, or one-sided Bay of St. John's, scarcely sees the extremely narrow pass in the high land which she must make, and on entering the Narrows, she has nearly half a mile of intricate navigation before she opens the whole harbour. On entering she has on her right hand, a precipice of sandstone and slate rock, nearly perpendicular, to the height of 300 feet, above which almost as steep, frowns the citadel called Signal Hill, a very narrow crest, 510 feet above the ocean waters. The Narrows themselves are only 900 feet across their sea-face, and diminish to about 400; so that from the deck, in passing, one looks up to the batteries upon batteries frowning in the sky, or on the edge of perpendicular cliffs. On the left the mountain is above 600 feet in altitude, broken, abrupt, and very picturesque, admitting however, near the water, a sort of shoulder of small elevation, bristled with dangerous rocks, and shewing again batteries near the water's edge, with a jutting promontory of solid rock, on which there is a formidable work with the harbour-light perched on the top of a vaulted barrack. After she has passed two-thirds of the Narrows, the town begins to open. In front is old Fort-William; on her right here, a strong water-level battery; and immediately over her, Waldegrave's battery, half-way down the precipice, with the Crow's Nest, a beautiful cone, capping all." In war time a chain is thrown from here to the Pancake Rock (a dangerous shelf on the opposite side), to prevent the admission of any hostile vessel. "The harbour then opens by a turn at right angles to the westward, and the whole city appears climbing up the side of a hill."

From the above graphic account, it will be readily understood that St. John's is a place of considerable strength, both from its natural position, and the fortifications erected for its protection. The streets are long and straggling; Queen-street, the principal one, has good stone houses, and is from 30 to 40 feet broad. Fort Townsend, the former residence of the governor, stands in the rear of the town. The new government-house is on a scale very disproportionate to the income attached to the government; the position also appears ill-chosen, being bleak and

much exposed, for which the noble view it commands can hardly compensate. The first estimate for its erection was £9,000; it was said to have cost nearly £250,000, but Sir R. Bonnycastle, on the authority of the officer through whom the payments were made, states the ultimate expenditure at much less than £35,000, including the furniture. The chief public buildings are St. John's church—a fine stone cathedral in course of erection by the Roman Catholics—the factory, to which the poor resort in winter to knit stockings, make nets, &c., and which contains a large and handsome public ball-room, an hospital, Wesleyan and congregational chapels, public schools, the old wooden court-house, with the jail, and some others. The town has been of late years much altered; indeed the calamitous fires mentioned in the foregoing chapter, by destroying great numbers of wretched wooden tenements made way for houses of a much better class. Sir Gaspard le Marchant, the present governor of Newfoundland, in a despatch dated 23rd May, 1848, thus adverts to the condition of the capital:—

"During the past year, great exertions have been made by the inhabitants of the town of St. John's to repair their losses, occasioned by the fire of the 9th June of the preceding year. New lines of streets have been laid out on an improved plan, both as to width and regularity, and intersected at suitable distances with cross streets or fire-breaks. In several quarters of the town new buildings have been commenced, and the works carried on with great spirit and energy.

"In the lower street, Water-street, on the side commanding the frontage of the harbour, many handsome shops and substantial warehouses of stone and brick have been erected, at very considerable expense, by the merchants, and this part of the town wears an improved appearance. Very many of these have been erected at a cost varying from £4,000 to £8,000, and the ground rental of the premises lining this frontage averages £3 a square foot. The Act, however, rendering it compulsory that all buildings in this street, as well as the south side of the street lying immediately above it in a parallel line, called Duckworth-street, should be either of brick or stone, does not come into operation till the next year; and it is much to be feared that, at the meeting of the local legislature, many and strenuous attempts will be made, and those successfully, for a further postponement of this most desirable measure; for, until this has been effected, in consequence of the contiguity of so many wooden buildings, serving only temporary purposes, the danger of a fire again spreading its ravages throughout the city, though to a certain degree lessened, will not be removed.

"The public buildings now in the course of erection are the custom-house, which will be completed in the spring, the colonial building, to be appropriated for the meetings of the local legislature, and the Protestant cathedral, towards which half the amount raised under the authority of the queen's

letter for the relief of the sufferers by the fire has been appropriated. A site has been fixed on for a market-house, and a sum of money voted for its erection, but, owing to the embarrassed condition of the finances of the colony, as yet no progress has been made with the work.

"In the past year I have, out of the funds at the disposal of the government, formed two large tanks in the centre of the town, affording at all times a copious supply of pure and excellent water, and likewise, being frost proof, of the greatest utility in the event of accidents by fire occurring in their neighbourhood. At one of the chief outlets of the town, commanding the frontage of the river, and forming the upper part of the harbour, a public walk, affording a place of recreation to all classes, as well as contributing to the health of the inhabitants, has been commenced, and in the course of the ensuing season will be completed.

"The crowded state of the burial-grounds in this town has likewise occupied my most serious attention; and for the purpose of abating, if not entirely removing, this evil, so loudly complained of by the inhabitants generally, I have purchased a piece of ground without the town, of nine acres in extent, and intend dividing and appropriating it as a cemetery for parties of all religious denominations, in proportion to the number composing the several creeds, and shall use my best endeavours for the closing of those within the town. Two companies, the one for supplying the town with gas, the other for the supply of water, have been incorporated by acts of the local legislature, the former in the year 1844, whose works are completed and in full operation; the latter in the year 1846, whose pipes are now being laid down, and it is presumed the town will have the benefit of the undertaking in the course of the spring.

"As no assessments are in force for any local or fiscal purposes, it is impossible to form any accurate estimate of the value of either household or other property in this town; the rental, however, of Water and Duckworth Streets has been by competent judges computed at between £35,000 and £40,000 a-year. The accompanying return, marked No. 2, will more accurately show the classification of the population of this town, the number of their houses, warehouses, &c., as well as the foreign vessels trading at this port, and the extent to which the fisheries are prosecuted by the capital of the island."

A considerable portion of land in the neighbourhood of St. John's has been brought under cultivation, and though it doubtless requires much toil and expense to render it productive, and is certainly inferior to other districts, yet the capabilities of the soil here, as well as elsewhere, have been greatly underrated. In Captain Loch's Report of the Fisheries, dated October, 1848, he says, "St. John's has enjoyed a more productive season than for many years past, which, with the cheering prospect of abundant crops in grass, grain, and potatoes, has given new vigour and life to the capital after the fire and famine of the last and preceding years. Cape Spear, about eight miles from St. John's harbour, is the most

eastern point of Newfoundland. It has on it a light-house, and is in $47^{\circ} 30' 12''$ N. lat., and $52^{\circ} 33' 27''$ W. long. Petty Harbour is a small and secluded station picturesquely situated; more to the south is the Bay of Bulls, which extends two miles into the land. The harbour is difficult of access on account of a sunken rock; but once in, vessels may ride in safety. The settlement is prosperous, near it are those of Witless Bay, Momables, and Brigus Bay, the last being of some importance. Cape Broyle is a good harbour, but of difficult entrance; its south point is in $47^{\circ} 2'$ N. lat., and $52^{\circ} 55'$ W. long. Capelin Bay is an excellent harbour, a little to the south of it is that on which stands Ferryland, the first permanent settlement. Mr. M'Gregor states, "that a considerable extent of the surrounding land is under cultivation," while Mr. Chappell describes the vicinity as rocky and destitute of any trace of cultivation. On the harbours of Aquaforte, Fermeise, and Renowes, are villages of the same names. We now arrive at Cape Race, the south-east point of the island, in $46^{\circ} 40'$ N. lat., and $53^{\circ} 8'$ W. long.; further to the south-west are two capes, each called Mistaken Point, on account of their being frequently mistaken for Cape Race in approaching the land from the southward. The Virgin or Cape Race rocks, so much dreaded by mariners on this coast, are stated by Mr. Jones, master of H.M.S. *Hussar*, to be in $46^{\circ} 26' 15''$ N. lat., and $52^{\circ} 56' 35''$ W. long.; they extend in an irregular cluster, the length being about 800 yards; the breadth varying from 200 to 300 yards, the least water being four fathoms and a half.

Trepassey Bay, is a spacious inlet with a good harbour on its eastern shores, on which is a settlement of some importance. Trepassey Bay contains the smaller bays of Biscay and Mutton; passing Cape Pine and St. Shotts (the most dangerous portion of the coast), we arrive at St. Mary's Bay, which is well settled, and has several extensive cod-fishing establishments and salmon rivers, and is separated by a tract of only ten miles from the head of Conception Bay, and of eight from that of Trinity. The next bay is that of Placentia, which is about 60 miles deep and 45 broad. The entrance lies between Cape St. Mary and Cape Chapeau Rouge, with several rugged islands near its head. The port and town of Placentia lie on the eastern side; and the chief harbour, which can only be entered by one ship at a

time, affords anchorage for 150. North Harbour is situated at the upper extremity of Placentia Bay, the western side of which is well populated, and contains many harbours, the principal of which are Marasheen island, Ragged island, and Mortier and Burin Bay. The eastern portion of the neck of land between the bays of Placentia and Fortune, is called Burin. From the head of Placentia Bay to Trinity Bay, there is a low isthmus, not more than three miles in length, across which the fishermen, during the time the French had possession, hauled their skiffs over ways laid for the purpose; it is this isthmus which connects the peninsula of Avalon with the main body of the island. The French paid much attention to their settlement on the east side of Placentia Bay, which they strongly fortified with the hope of driving the English entirely from the fisheries of Newfoundland.

May Point terminates the peninsula which separates Placentia Bay from Fortune Bay. From May Point to Cape La Hune is 17 leagues, and in this place lies Fortune Bay (60 to 70 miles deep, and 20 to 30 broad), which receives several rivers flowing from the inland lakes, and contains numerous harbours and stations. The villages of Fortune, Great Beach, and Lamelin, lie opposite the French islands of Miquelon and St. Pierre. Mr. Jukes speaks of two men in Lamelin who had "fifty head of cattle a piece," which they fed on the grass growing on the adjacent marshes. The islands of Great and Little Miquelon (the lesser of which is called Langley by the English), were, some 60 or 70 years ago, divided by a channel of two fathoms depth, which is now entirely filled up, and its place occupied by a long narrow line of sand hills, with a beach on each side. Mr. Jukes describes the scenery as very striking, the high land of Langley sloping down towards the west, covered with rich green moss, into a dense mass of wood, and speaks also "of extensive meadows, where enough sheep and cows are fed to supply St. Pierre and the neighbouring population;" he adds, "they have very strict regulations in the port: no English boats or vessels are allowed to come in having fish on board, on penalty of being seized, and no Englishman is allowed to bring English goods and manufactures, or to set up a shop in the town. There is, however, an American warehouse belonging to Atherton and Thorne, which seemed to be doing a large business." St. Pierre, Mr.

Jukes describes as a mass of rocky hummocks, the hills rising to a height of 400 or 500 feet, directly from the water, the hollows and flatter parts consisting of marshes and ponds. To the north of St. Pierre is a lofty islet called Colombier (dove-cote), from the multitude of puffins which breed there, and are continually flying about in large flocks. To return to Fortune Bay,—at Harbour Britain there is a large mercantile establishment; Hermitage Bay is being rapidly settled, and the Burgeo islands had in 1842, 650 inhabitants. The salmon fishery on this coast is extensive; and the neighbourhood is the scene of the Newfoundland whaling. At Little Barrys Bay, according to Sir R. Bonnycastle, 100 Mic-Mac Indians trade in salmon, geese, and furs. Proceeding westward we reach Port-aux-Basque, and passing Grand Bay, arrive at Cape Ray, the western extremity of the island, in 47° 36' 49" N. lat., and 59° 21' W. long. From this Cape to the Great Bay of Notre Dame, the French claim the exclusive control of the coast, that is, of all the western, northern, and north-eastern shores of this the oldest British colony. To quote once again the words of Sir R. Bonnycastle (and it would be difficult to find a better authority on the affairs of Newfoundland,) "notwithstanding all their treaties, their resident population amounts, it is said, to upwards of 12,000, and as they are nearly all engaged in a most lucrative fishery, they receive every encouragement from their government, are registered as seamen, and, in fact, constitute to France what Newfoundland was before the last war to England, the nursery for her seamen."

Captain Granville Loch, R.N., thus describes the condition of the British settlement at St. George's Bay, in an official report, under date 2nd October, 1848:—

"There are 200 resident planters in this bay who receive assistance in hands, during the fishing season, from Cape Breton and its adjacent shores. Their fishing usually commences a month or six weeks earlier than that on the coast of Labrador. This year they began the 27th April. They fish herring, salmon, trout, and eels, besides the cod. Up to the present date (17th August), their catch has been 10,000 barrels of herrings, 200 barrels of salmon, and but a small quantity of cod. They employ about 200 boats and 800 hands, and send their fish to the Halifax and Quebec markets during the summer and fall. The fishings end about the 1st of October, with the exception of the eels, which are caught in great quantities, and afford subsistence during the winter. They have bait without intermission during the entire fishing, and use herring, caplin, squid, and clams. The climate is usually dry and mild; and if their society was under proper control, St. George's Bay

would offer many inducements to the industrious settler. The harbour is occasionally blocked up by ice, but for no length of time, and is always open by the middle of April. The inhabitants consist of English, a few Irish, and a number of lawless adventurers, the very outcasts of society from Cape Breton and Canada, and it is very distressing to perceive a community, comprising nearly 1,000 inhabitants, settled in an English colony, under no law or restraint, and having no one to control them, if we except what may be exercised through the influence shown by the single clergyman of the Established Church, who is the only person of authority in the settlement. I am told, the reason why magistrates are not appointed is in obedience to direct orders from the Home Government, it being believed against the spirit of the treaty with France. Under these circumstances, I would recommend, either that a vessel of war should be appointed to remain stationary in the harbour, or that the society should be forcibly broken up and removed, for violent and lawless characters are rapidly increasing, and neither the lives nor property of any substantial or well-disposed settlers are safe. Four cases of violent assault were brought to my notice as having recently been committed upon parties, some of whom were injured for life, and others nearly murdered; and I am sorry to understand the culprits had succeeded in escaping into the woods upon the appearance of her majesty's ship.

The cultivation of grain has been commenced with considerable success. Wheat, oats, and barley ripen well, and turnips grow exceedingly fine. Potatoes and garden-stuff are cultivated also to a considerable extent. A great quantity of fur is collected; but the trappers suffer great losses by the frequent robbery of both traps and their contents."

Mr. Jukes describes the country south of St. George's Bay as gently undulating, with a fine short turf, and more like some parts of England than any he had seen in Newfoundland. He landed on 11th September, 1839, at the mouth of a brook near Crab's river, on a very pretty spot, with green meadows on each side of the brook, and a few neat houses clustered under the shelter of a rising bank, covered with green turf. Geese were feeding on the grass; ducks and poultry were scattered about; and a few cows and some sheep, gave it all the appearance of a pastoral scene at home. There was actually a fence and a stile to get over into a small field, with a footpath across it. The patriarch of the settlement, Mr. Morris, came and invited Mr. Jukes to sit down to breakfast with them, when he found plenty of fresh milk, eggs, and butter, hot rolls, excellent tea, and a snow-white table-cloth. It really seemed to the geologist a little paradise. From the rising ground behind the house the view was very beautiful. A tract of low undulating land, covered with a rich sea of wood, stretched away into the interior for 15 or 20 miles, and was backed by a range of blue hills in the horizon that

rose towards the S.W., while towards the N.E. they gradually died away, and coalesced with the hills at the head of the bay. The wood was not of the sombre hue so generally seen in Newfoundland, but was patched with the light green of the birch, and what the colonists term the *wych hazel*, the *barn*, and the *aps*, and probably the ash was present. Finally, says Mr. Jukes, the little rich-looking valley of the brook, with its bright waters winding away into the woods, completed a most lovely and most English picture. Mr. Morris and his son-in-law, Stephen Shears, arrived in Newfoundland without a shilling: they have now fields of wheat, cows, oxen, sheep, good habitations, and every comfort. The climate, by their account, is very fine during the summer; snow, they say, generally sets in about three weeks before Christmas, and breaks up in the beginning of April.

There are some Mic-Mac Indians in this fine bay, into which several rivers, emerging from the lakes in the interior, empty themselves, and on the N.W. lies the magnificent double harbour of Port-au-Port, divided from it only by a narrow isthmus, from which point the most successful attempts have been made to explore the interior of the country, which is reported to be mountainous, abounding in rivers, extensive lakes (or ponds, as they are called in Newfoundland), and grassy plains. The Bay of Islands stretches out three arms into the land, one of which forms the embouche of the Humber, the most considerable river yet known, its course having been traced for 114 miles to the north-westward, where it issues from a cape of about ten leagues in length. On this bay there are British settlers, a great timber station, and in it, as its name imports, are many islands—Pearl, Harbour, Tweed, &c. Bonne Bay has a good harbour, but of difficult entrance. Ingornachois Bay contains three harbours, the chief of which is Port Saunders, a spacious inlet, so land-locked, that 90 or 100 vessels may lie perfectly secure from every wind; yet, owing to the absence of cod, it is uninhabited. To the north, round Point Riche, is St. John's Bay, which receives the waters of Castor river. Beyond Point Ferolle, the northern boundary of St. John's Bay, are a few inconsiderable inlets along the straits of Belleisle, which separate Newfoundland from the adjoining coast of Labrador, and are in length about 50 miles by 12 broad.

Cape Norman, 20 leagues beyond Point

Ferrole, is the N.W. point of Newfoundland, and has on its E. side a large bay, called Pistolet Bay, bounded by Burnt Cape. Belleisle North, an island at the head of the strait, has an excellent cod fishery, claimed by the French. We next come to Quirpon Island and harbour, the northern point of Newfoundland, in $51^{\circ} 39' 45''$ N. lat., and $55^{\circ} 27' 50''$ W. long.; thence to Griquet Bay and St. Anthony's Harbour. Hare Bay is a deep gulf, the bottom of which intersects the island for two-thirds of its breadth at this point, branching off into innumerable bays and coves, sheltered by lofty hills. From this harbour to White Bay, and thence to Cape St. John, the coast is indented at short distances by commodious and much-frequented harbours.

Pacquet Harbour has an excellent fishery. After passing Cape St. John, the limit of the French claim, we enter the bay of Notre Dame, whose shores are broken by innumerable smaller inlets. Nipper Harbour is well inhabited in summer; but, in winter, the people either go to St. John's, or retire to the woods. In Hall's Bay some trappers and hunters live, who cross to the Gulf of St. Lawrence in their hunting excursions.

The Bay of Exploits, which is of great extent, contains a number of islands, and several settlements, especially on Twillingate and Fogo islands. A large river of the same name falls into it, abounding in salmon, and flowing from Red Indian Lake, a course of about sixty miles, much broken by rapids. Gander Bay on Hamilton Sound has some thriving fishing establishments. From Cape St. John to Cape Freels the whole coast presents a continuation of ledges, shallows, islands, rocks, and winding bays, which afford excellent fishing grounds. To the south of Cape Freels is the Island of Greenspond, which is situated at the north-eastern extremity of Bonavista Bay, and has some extensive mercantile establishments. This noble bay is diversified by numerous islands, and contains many safe havens. It has several good fishing stations, the chief place being Bonavista at its eastern extremity. The next harbour is that of Catalina, where Jacques Cartier landed. It is situated in $48^{\circ} 42'$ N. lat., $52^{\circ} 59' 20''$ W. long., and stands almost at the head of the small peninsula between the great bays of Bonavista and Trinity. Trinity Bay has many settlements and harbours, the most important are those of Trinity town and harbour, besides which there are those of

Bonaventure, Ireland's Eye, Random Sound, Islands and Bay of Bulls, *Tickle Harbour* (a word often used in the Newfoundland charts, signifying a small safe harbour), Dildo Harbour, Heart's Delight, Heart's Desire, Heart's Content, New Perlican and Old Perlican Harbour, formerly a place of some note, which having passed we arrive at Break-heart Point, near which on the south-east is an insulated rock called Baccalao, said to have been first seen by Cabot in 1497, and called by him *Prima Vista*. The numerous birds on this island are called by its name. In a former work I stated them to be preserved by the governor's proclamation, because their cries being heard far at sea served as a warning to mariners during the frequent fogs; but Sir R. Bonnycastle, to whose authority I very willingly defer, says that I have been misinformed, the reason for their preservation being because they are sea marks for the banks and coast. To the south-east of the island the deep and spacious inlet of Conception Bay stretches into the land for a considerable distance, being about 50 miles long and 20 broad. The west shore is the best cultivated portion of Newfoundland, and the numerous, neat-looking villages render it an English-looking coast. There are several towns of rising importance. Carbonier, or Collier's Harbour is one of the chief, and is famous for the spirited defences made by its inhabitants against the French. The harbour, though spacious, is not considered at all seasons secure; there are several settlements, such as Brigus, Port de Grave, Bay of Roberts, Harbour Main, Spaniard's Bay; in fact the whole shore from Point de Grates to Holyrood, a considerable station at the bottom of the bay, is studded with villages placed in the deep inlets separated by lofty perpendicular rocks, which run out into the sea for two or three leagues, though they are not a mile in breadth. The scenery on this part of the coast is majestic and wild.

Near Port de Grave there is a remarkable basin hollowed out in the cliffs by the action of frost, or the more certain operation of time, in decaying the slate clay, of which the rocks are composed. First a circle is entered, 20 feet wide by 20 high: and beyond is the basin itself, which is about 300 feet in circumference, and surrounded by perpendicular rocks 120 feet in height, with a border of dwarf spruce at top. At one corner a little exit, among broken masses of rock, carries off the superfluous water; the

depth near the centre of the cavity is about 14 feet. Captain Robinson states Harbour Grace to be a good port, and although the space between the end of the bar and the north shore is rather narrow, a large ship, well handled, may beat through or back, and fill in and out with the tide. Approaching the town from the northward you pass a large house surrounded by some considerable trees, which has an English appearance; as has also the little town, with its parsonage in the centre of a pretty garden, and weather-beaten church, bearing an antique, un-Newfoundlandish air.

On the eastern side of Conception Bay there are several islands, amongst which is Bell Isle (six miles long), so called from the shape of a remarkable rock close to its western side. This island is distant from Harbour Grace about twelve, and from Portugal Cove about four miles; and the soil, consisting of a loose deep black earth, is so extremely fertile as seldom to require manure, while wheat yields twentyfold, potatoes fifteen, and oats, hay, and vegetables thrive remarkably well. Portugal Cove is the only settlement of any consequence on the east side, but unlike most other positions it has no safe harbour, and only an open roadstead, rendered dangerous for the fishing craft in bad weather.

The scenery about Portugal Cove is described as strikingly picturesque, a succession of lofty hills on each side tower over the road, and shut out every other object; their conical or mamillated peaks are covered with wild stunted forest and bold masses of rock, intersected by cascades or tiny waterfalls. The scenery of the village at Portugal Cove is very beautiful, although the shore is a succession of ragged and broken rocks.

Cape St. Francis, the E. boundary of Conception Bay, is distant seven leagues from St. John's Harbour; four leagues lower is Torbay, a fishing station; and three leagues further is St. John's.

Having now completed the circle of the island, it remains only to observe that there is much fine scenery in Newfoundland, many fertile spots even on the coast, and that British industry, economy, and skill have already laid the foundation of many towns and villages, which, from their position, will probably before long attain considerable importance.

THE LABRADOR REGION is little known; it is thus described by Captain G. Loch in his recent report:—

"This extensive coast, commencing from the estuary of the St. Lawrence, and stretching far north to the regions of perpetual snow, is one of the most barren and desolate in the world; and it seems that nature has removed the means of supporting human life from its surface to the waters which surround it, the abundant productions of which offer the inducement, and reward the industry and perseverance of the thousands of adventurers who resort to it from both Europe and America. The portion forming the northern boundary of the straits of Belleisle is not so well marked or grand in feature as when it recedes from the island of Newfoundland, either to the north or south. From the sea, the country has a green and alluvial appearance, and it is not until close to it that this is lost, and nothing is seen but bare granite rocks, partially covered with moss and stunted shrubs; juniper, birch, and poplar trees grow in the valleys, where the soil is of sandy clay, the temperature much higher, and the fogs less frequent than upon the coast. Here deer, bears, wolves, foxes, martins, otters, beavers, and a great variety of wild fowl take up their abode, until driven to the coast by the snow-drifts of approaching winter. The ice does not usually leave the bays free for vessels to enter before June, and it begins to form again in the shallow bays and pools in the beginning of September.

"The entrance of the Strait of Belleisle between York Point and Cape Bauld is 26 miles wide, the latter point bearing from the former S. by E. At Cape Norman, 18 miles to the westward of Cape Bauld, the opposite coast of Labrador is distant only 14 miles, but the narrowest part of the strait is at Point Amour, in Forteau Bay, where it is only nine and-a-quarter miles wide; the western entrance of the strait, between Greely Island and Point Ferroll, is nearly 21 miles wide, the point bearing from the island S.S.W. The course and distance through the strait is S. 54° W. true, or, according to the mean variation, W. $\frac{1}{4}$ S. 65 miles.

"The navigation of this strait is attended with very considerable danger, from sudden fogs, wandering icebergs, and strong irregular currents. In spring, the entrance of the strait to the northward is frequently almost blocked up by large ice islands, which are set to the S.W., even against strong winds from that quarter; these are broken up into smaller pieces as the summer advances, and are met with throughout the entire season. It is thus apparent, that the dangers of the coast are greatly increased in dark or foggy nights, during which no vessel should attempt to run, for it is impossible, under these circumstances, even with the most careful watching, to guard against unknown dangers, or to be sure of the vessel's position within ten miles, owing to the frequent irregularity in the set of the currents. The prevailing current runs directly through the strait to the S.W., and its rate is at times two knots, diminishing gradually in force as it spreads out in the wider parts of the gulf; but yet its course and velocity is greatly influenced by the prevailing winds; for example, with the wind from S.W., the stream sets along the west coast of Newfoundland, from Point Ferroll past Point Riche. In short, there is no constancy either in the rate or set of these streams, for the winds and the irregular tides modify the set and rate of the equally irregular current, in a manner which it is extremely difficult, if not impossible, to calculate upon with any degree of certainty. It would be prudent, therefore, on the approach of a dark or foggy night, to secure a safe anchorage, if possible; and

even if a vessel bound to the gulf, and running with an easterly wind, should find no port fit for that purpose, I would advise her standing over to the Newfoundland side of the strait, where the soundings are not so deep, and the icebergs not so prevalent, and then either lying to until daylight, or anchoring in the stream."

Mountains and Hills.—On the gulf shore of Newfoundland, distinct ranges of mountains extend from Cape Ray, where they commence with three sugar-loaf hills, and then proceed continuously in a N.E. and W. direction. These ranges, says Sir R. Bonnycastle, stretch very far up the west coast, and with occasional lofty off-shoots which reach the sea, are usually so distant from it as to leave a belt of comparatively level country, of considerable width, through which the small river drainage passes. The elevations have a steep face towards the N.W., and are rather flat and regular at the summit. One conspicuous hill bears true N.E. from St. George's harbour, distant 20 miles in a straight line. The "Blow-me-down hills," on the south side of the Humber river, have their least elevation at 800 feet. Beyond the coast ranges to the eastward and northward the country is covered with rivers and lakes, of great extent, and is of course well drained by them in a vast area, reaching almost to the Atlantic cliffs on the east coast.

In Avalon district or province, there are two ranges of hills, one from the back of Renew's to Holyrood, in Conception Bay, extending for 20 miles in length, not lofty, but with precipitous and rugged outlines, the heights or hummocks called the "Butter pots" at either end are about 1,000 feet, and there are other eminences of nearly equal altitude in other parts of the range. The other ridge passes from Cape Dog, in St. Mary's Bay, to near Chapel Arm in Trinity Bay; it is less broken and rugged than the former mentioned, has a more continuous outline, and its highest elevations of 1200 to 1,500 feet, are for the most part rounded or flat topped. The Sawyer's Hills (so called from their outline), south of Placentia Bay, is a subordinate ridge, as is also some high rough land forming the isthmus connecting Avalon with the main part of the island, and the elevations about St. John's, viz. Signal Hill 520 feet, South-side Hill 700 feet, and Branscombe Hill 870 feet above the sea.

A mountainous country in miniature (none of the hills exceeding 1,000 feet), extends along the west shores of Placentia Bay and the adjacent islands, from Chapeau

Rouge to Piper's Note. This range of lofty, broken, and precipitous land, runs along the west side of Trinity Bay to Trinity harbour, and thence crosses into Bonavista Bay about Keel's Head. Mr. Jukes states that it has an irregular width of several miles, occupies the east half of the peninsula between Fortune and Placentia bays, and forms a fine peaked and serrated mass of hills some miles west of Random Sound in Trinity Bay, which stretches also to the neighbourhood of Goose Bay in Bonavista Bay. One isolated peak upwards of 1,000 feet above the sea, named Sainter's Hill, or Centre Hill, or Powderhorn Hill, overlooks nearly the whole of the Bays of Placentia and Trinity, as well as some of the high grounds about Conception, Bonavista, and Fortune Bays. The west side of Bonavista Bay from Clode Sound, northwards, is low, but as far as Mr. Jukes could judge of the interior, the country towards the N.W. consists of regularly undulating ridges, running generally N.N.E. and S.S.W., never rising more than 300 or 400 feet, and covered with dense wood.

The "Blue Hills" run about N.N.E. and S.S.W., in a line with the promontory between Gander Bay and Dildo Run, and are not supposed to exceed 1,000 feet in height. Another range of 1,000 to 1,500 feet in elevation, are seen from the mouth of the river of Exploits, closing the view up the valley of the lower part of the river: they are flat-topped with precipitous sides, which gives them a square appearance. A ridge of high land runs from them towards the S.S.W.

The southern portion of Newfoundland has very lofty cliffs, and the high land contiguous the sea, excludes all view of the interior from the sea. The country is said to be grooved in every direction by small valleys and ravines, covered with round hummocky knobs and hills, with rocky and precipitous sides.

The summits of the hills and ridges and other elevated and exposed tracts termed "barrens" are covered with a thin and scrubby vegetation, and are somewhat similar in appearance to the moorlands of Yorkshire; they are frequently devoid of vegetable soil, and consist of bare patches of gravel, boulders, and crumbling fragments of rocks. In the hollows of these barrens, as in other situations, the dwarf junipers, called in Newfoundland "tucking bushes," grow about breast high, with strong branches at right angles to the stem, and stiffly interlacing; their flat tops are as level as if they had

been regularly clipped. They are so stiff that it is almost possible to walk on the summits of a dwarf juniper tract, but to penetrate far through the bushes is impracticable; and this is one of the obstacles towards the exploration of the interior.

Lakes.—Newfoundland is covered with lakes and lakelets (called ponds). They are found all over the face of the country, not only in the valleys, but on the higher lands, and even in the hollows of the summits of the ridges, and on the very tops of the hills. They vary in size, from pools of 50 yards in diameter, to lakes of 30 miles long by 5 broad. From the top of the N.E. mountains in Avalon, 67 ponds were counted, some of them 2 or 3 miles across; none less than 100 yards, and none more than 10 miles from the base of the hill. The principal are the Grand Pond, Red Indian, Gander Pond, George the Fourth's, Jameson, Wilmot, and Bathurst lakes. There is also a large unexplored lake on the E. part of the island, near Bonavista Bay.

Grand Pond is 50 to 60 miles long, five miles broad at the widest part, viz., to the N.E., and has, at its western extremity, an island 20 miles long by 4 or 5 wide, which causes the lake to divide into two arms. The island is steep and lofty, like the surrounding country, at the S.W. end, but is lower to the N.E. The Indians say, that by means of a chain of ponds, they can navigate to the Great Lake from St. George's harbour.

Red Indian Lake is said by the Indians to be about 30 miles due E. from Grand Pond, and is about 30 miles long by 5 to 6 broad.

Victoria Lake is about the same length as the preceding, but not so wide. This lake has a water communication with Bathurst, Wilmot, and George the Fourth lakes; but we know too little of their extent, or of the surrounding country, to say more on the subject.

GEOLOGY.—A considerable part of the coast line of Newfoundland was examined by Mr. J. B. Jukes, as geological surveyor to the local government in 1839–40. The aqueous or stratified rocks consist of the following formations:—

Formations.	Subdivisions.
1. Coal	{ • Upper portion. • Lower or red ditto.
1 ^a . Magnesian limestone.	
2. Upper slate formation	{ • Belleisle shale and gritstone. • Variegated slates.
3. Lower slate ditto	{ • Signal hill sandstones. • St. John's slate.
4. Gneiss and mica slate.	

The unstratified or igneous rocks consist of various kinds of trap, greenstone, serpentine, hypersthene, porphyry, sienite, and granite.

The upper part of the *coal formation* consists principally of dark shales, with brown and yellow sandstones or gritstones in thin beds. The lower part is characterized by beds of red sandstone, red and green marls, and gypsum. The two parts pass by insensible gradations into each other. Yellow, brown, and whitish flags and sand stones, dark blue clay, and an occasional bed of black shale occur throughout the formation. Some of the lighter coloured sandstones contain carbonate of lime and the red and green marl, and large masses of gypsum, in thick beds. The total thickness of the coal formation is considerable, the portion examined by Mr. Jukes had a depth of 1,000 to 1,500 feet. The *magnesian limestone* seen, was generally of a yellow colour, about 50 feet thick, in beds of two to three feet each, frequently splitting into flags. One bed of carbonate of lime was found of a grey colour, two feet thick, with a band of brown chert. The *magnesian limestone* seen by Mr. Jukes had generally a yellow colour, but rudely spheroidal concentric stripes of pink frequently occurred. These, whichever direction the rock was split, produced markings similar to those seen in fortification agate, but on a much larger scale, being often two or three feet across. The *upper slate* formation is supposed to be below the coal formation in the series. The superior portion consists of dark micaceous shale, splitting into thin laminae, with interstratified beds of a very fine-grained grey gritstone, which increase in number, thickness, and coarseness of grain with the increasing depth, until the shale disappears altogether. The thickness of the two portions seen was several hundred feet. The *lower slate* series is deemed by Mr. Jukes to belong to an older formation, and to be composed of two groups, viz., a mass of red and grey sandstone, which, at the Signal hill entrance of St. John's harbour, has a thickness of 800 feet, and the St. John's slate, in which beds of red, green, and greystone alternate near the junction of the sandstone, with the slate rocks forming the transition beds between the two. The thickness of this formation is estimated at 2,000 to 3,000 feet or more. The change of the slate is frequently parallel to the line of stratification, and produces excellent roofing slate. Veins of white quartz and masses

of porphyry are found associated with the slates.

The *Mica slate and Gneiss*, and also the igneous rocks, do not differ from those usually found in other parts of the globe; the mica and the gneiss, however, alternate with and pass into each other; excepting some very indistinct vegetable impressions in the coal formation, no organic remains have yet been found in any rock in Newfoundland.

Nearly the whole peninsula of Avalon is composed of the *lower slate formation*. The country W. and N.W. of Avalon is composed chiefly of variegated slate, coarse sandstone, and conglomerate. The region W. of Fortune Bay, and E. of Cape Ray, consists of primitive rocks, chiefly granite; also gneiss, sienite (porphyry and basalt), quartz, mica slate, clay slate, and turpentine. The W. coast from St. George's Bay to the northward contains, according to Sir R. Bonnycastle, the carboniferous rocks. Mr. Jukes says that mica slate, gneiss, and their associated rocks, with occasional patches of primary limestone, extend along the whole of the W. side of Newfoundland, and from the Humber river he supposes they form an unbroken ridge to Cape Quirpon, the extreme northern point of the island. On the N. side of St. George's Bay magnesian limestone dips at a slight angle to the N.N.W. At Grand Pond the cliffs are of gneiss and mica slate. In the N.E. corner an exposed section was found to contain (1) sand and boulders, 10 feet; (2) softish grey and yellowish sandstone, 5 feet; (3) ditto ditto shaly, 1 foot; (4) coal, some part like cannel coal, 6 inches; (5) yellow church, 2 inches; (6) grey bind, 2 feet. All these beds dipped at an angle of 30° to the S.E. The country between Port aux Ports and the Bay of Islands is probably composed of igneous rocks: it is lofty and unbroken. A calcareous formation stretches across the mouth of the Humber river, in hills of 400 to 500 feet high. About three miles up the river are lofty precipices of pure white marble, crowned and surrounded by thick woods, which closing in upon the rapids, produce most picturesque scenery. Mr. Jukes says that blocks of this pure marble of any required size may be procured. Mr. Cormack, when crossing the island from Random Sound to St. George's Bay, mentions having seen abundance of serpentine E. of Jamson's lake; N. of the Bay of Despair, granite, sienite, quartz, gneiss, fine clay slate, alum slate, and indications of coal and iron. From the hills at

the back of St. George's Bay, to nearly the centre of the island, he mentions no other rock than granite. In the neighbourhood of Canada Bay on the W. side of White Bay the geological surveyor was informed that limestone exists in abundance, and a specimen brought to St. John's was identical in mineralogical character with the white marble of the Humber.

The "strike" throughout the island rarely varies from a true N.N.E. and S.S.W. course, hence all the other prominent features of the country run in the same direction, not only as regards the ranges of hills, but also the principal lakes, deep bays, and valleys, lie in the same line of bearing. The Bay of Islands is the only important exception to this rule. The "strike" and cleavage of the rocks are not absolutely dependent on the strike and dip of the beds; the "strike" of the cleavage is not invariably parallel to the strike of the beds; but the cleavage is much more constant as regards its strike and dip in relation to the points of the compass than it is in relation to the strike and dip of the beds, or than those latter are to the horizon and points of the compass.

As regards the relative age of the igneous rocks, Mr. Jukes supposes that the granites are generally newer than the mica slate, and the gneiss which repose upon them. The coal formation seems to be contemporaneous with that of Western Europe, Nova Scotia, Cape Breton, and New Brunswick, and the most modern group of stratified rocks in Newfoundland; he adds, "the mass of the granites and other unstratified rocks are more recent than the lower slate formation; some of them at least more recent than the upper slate formation, and they may be more modern even than the coal formation." Lieutenant-colonel Sir R. Bonnycastle, alludes to the evident volcanic action among the primary sandstones and conglomerates, and other indications of the same power which has been exhibited in Canada, and generally British America. Granite boulders are plentiful, and frequently of large size, and found on the tops of hills 400 to 500 feet, composed of gritstone, slate, or sienite, 20 or 30 miles from where any granite is to be found. Over the greater part of the island, drifted materials to the depth of several feet are to be met with.

At the river Exploits, was found a fine unctuous clay, perfectly plastic, 15 or 20 feet thick, and lying in thin layers, usually of a

slate colour, with a reddish band here and there, but no sand. Above the clay rests a bed of fine sand two or three feet thick. It is evident from the foregoing, that abundance of building and of roofing materials, of limestone and of marble are obtainable in Newfoundland.

The prevailing rock on the Labrador coast, so far as we know, is gneiss. On this at Anse le Loup, a bed of old red sandstone is super-ground, about 200 feet thick, and extending above half a mile inland. Here also, as on every other part of the coast of Labrador visited, the appearance of the cliffs, and of the land near them, and the rolled masses, inland, which have evidently been exposed to the action of the sea, seem to prove that it has considerably receded. The sandstone is generally red and white, in alternate stripes, and presents a remarkable mural front to the sea. Near the surface it was strongly marked with iron. The whole of the rock was composed of white quartz and yellow felspar; the grains being generally as fine as oatmeal, though occasionally coarser, even to the extent of half an inch in diameter. Both coarse and fine, bear marks of being a mechanical deposit, and are, with few exceptions, perfectly distinct, without the least appearance of amalgamation. Over the red sandstone was a thin stratum of red compact felspar, containing vegetable impressions, and also horizontal. Above this were varieties of secondary limestone, arranged in parallel strata several feet thick, and full of shells. Detached masses of primitive limestone were also found; and a few miles from the shore the secondary formations generally disappeared, leaving gneiss and mica slate on the surface.

MINERALOGY.—*Coal.* There are beds of this valuable mineral on the south side of St. George's Bay, and in the counties north of the Great Pond; there are probably other beds on the west coast. The Newfoundland coal field is evidently a continuation of the coal strata in Nova Scotia, Cape Breton, New Brunswick, and Gaspé. Mr. Jukes says, that the seams he saw were of no great thickness, but that more important ones will probably be found. At eight miles from the Gulf shore a bed of coal, known to the Mic-mac Indians, was seen of three feet in thickness and of excellent quality. The guides said that equally valuable beds, in a similar parallel were to be found up the Codray river. The extent of the coal field is estimated at 25 miles long by 10 broad.

As population increases in the island this discovery will be found of great value, and tend much to its improvement.

Gypsum comes out in abundance on the sea cliffs at Codray harbour, and the S. side of St. George's Bay. Beds of limestone of inferior quality are found in Mortier Bay, and Chapel Cove in Holyrood, and in Conception Bay.

Copper.—A small vein of sulphuret and green carbonate exist in the Signal Hill sandstone of Shoal Bay, and was worked to some extent in the middle of the last century.

Lead.—Crystals of galena were seen in the sienite on the west side of the harbour of Great St. Lawrence. There is said to be an *iron mine* on the northern side of Belle-isle, and another at Harbour Grace. There is also a quantity of the mineral called marcasite, copperas stone, and horse gold, iron pyrites (which some of the earlier discoverers mistook for gold), found in the vicinity of Catalina harbour.

Salt springs are reported near the W. coast.

SOILS.—The thick coating of moss, which Mr. Jukes calls the "curse of the country," prevents the nature of the soil being generally known: where this moss has been cleared away, as at the south side of St. George's bay, the excellence of the earth has been manifested. The soft sandstones and rich marls which compose the coal formation, generally form very fertile districts. The timber, natural grass, and clover found in various places, indicate a productive soil. There are valuable alluviums in the neighbourhood of the rivers and lakes. The stunted forests on the east and south shores mark a poor country; but the large forests in the interior and to the westward, show that there is abundant room for successful agriculture, and that Newfoundland could well supply itself with vegetable and animal food. On the settled parts of the east coast there is none of the rich black soil caused by accumulating vegetable decomposition. Around St. John's the soil is shallow, poor, and hungry, formed of decomposed sandstone and slate rocks, with a loose and friable mixture of silicious and aluminous matters. It requires constant manuring of fish, seaweed, mud, and ashes, to produce crops. There is much of a whitish-gray clay about St. John's; passing through the usual gradations to pipe-clay, unless largely mixed with lime, it is too purely aluminous to be

serviceable. Wherever the variegated slate, or the igneous rocks, are found, the land is better, the grasses more luxuriant, the forest-trees finer, and the potato crops are more certain. The belt of a few miles along the east coast, consisting of decayed sandstone coloured by iron, with a saline atmosphere, and exposed to almost constant tempestuous weather, affords no criterion of the fertility of other parts of the island.

CLIMATE AND DISEASES.—The climate of Newfoundland is different in the northern and southern districts, and the west coast is more sheltered, and therefore milder than the east coast. The weather, although severe, is less fierce than that of Lower or Eastern Canada. The summer is shorter than that of Canada, the autumn less certain, and the winter a series of storms of wind, rain, and snow. Snow does not lie long on the ground, and the frost is less intense than in Western Canada. Winter lasts from the beginning of December until the middle of April. January and February are the coldest months. Severe gales of wind extend along the coast, the coldest from the N.W. The land or westerly winds are naturally drier than the easterly winds, which sweep over the Atlantic for three-fourths of the year, and cause considerable evaporation from the ocean over the banks. In Newfoundland, as in Canada, the land or N.W. wind in winter is bitterly cold; in summer it is pleasantly warm. The sea, or north-easterly wind, is cold both in summer and winter; the south-easterly, warm. During a long winter, the brilliancy of the aurora borealis, and the splendid lustre of the moon and stars give peculiar beauty to the atmosphere. The most remarkable feature connected with Newfoundland is the fogs on its banks and neighbouring shores.

The fogs of the Gulf of St. Lawrence are attributed to the *coldness* of the Gulf waters, which is believed to be constant a few feet below the surface as well as at great depths; every gale of wind brings this cold water to the surface, by which the temperature of the air is reduced below the dew point, at which suspended vapours are precipitated and become visible. Those on the Banks of Newfoundland are most probably caused by the cold deep water flowing from the Pole to the Equator, being there forced to the surface in consequence of the interruption given by the banks to its southward course. The surface water on the Great Bank is many degrees colder than that of the neighbouring sea,

and much less than that of the Gulf stream, which is within a short distance.

Mr. Jukes describes the water in Trinity Bay as "bitterly cold," even in the middle of a warm July, and so singularly clear that when the surface was still, the echini, shell-fish, and cretiniaë clinging to the rocks, crabs and lobsters crawling on the bottom, fish, medusæ, and myriads of sea creatures floating in its depths, were as clearly visible to a depth of 30 or 40 feet, as in the air itself.

The fogs on the banks of Newfoundland, and even in the Gulf of St. Lawrence, are sometimes so dense, that in fine, almost calm weather, with the sun shining over head, two vessels pass each other unseen, while the voices of persons talking can be heard from either ship. The fog appears to lie on the surface of the water, for when near land, an observer from the mast-head may descry it quite distinctly, while on deck no object within a few yards distance is visible. The fogs are not generally attended with rain, but the decks are often kept wet, and the higher masts and rigging collect the condensed moisture of the atmosphere in large drops. Fogs do not prevail at all seasons; in May and the beginning of June they are most prevalent. The annual register of fogs for 1841, shews: January, one day and a half; February and March, none; April, one; May, three; June, two; July, one; August, one; September, four; October, one; November, two; December, one. Total, 17½ days. Of light fogs or mists there were in 1841, 19½ days: shewing, altogether, 37 days of foggy weather throughout the year. The E. and S. shore of Newfoundland are more subject to fogs than the W. coast. In summer, an easterly wind brings fog; W. and S.W. winds, rain. The land or W. winds are drier.

In the early part of summer, when the waters have acquired a temperature approaching that of the air, a peculiar mirage is observable off Newfoundland and in the Gulf of St. Lawrence; during its early existence the line of trees with which the hills are covered, seem raised much above the level of the rest, resembling a lofty hedge row; this, however, is soon lost, as all the trees apparently attain the same height, giving the appearance of an immense table, stretching from hill to hill; the shores in the mean time assume the semblance of a great wall, and the island seems girt with a similar inclosure, or bounded with precipices all

round; their tops also look flat like tables, and the small island often assumes a flower-pot shape. Dr. Kelly observed one instance in the river St. Lawrence, where the islands of Bic and Biquette appeared to join—their wooded tops to meet, leaving an arch, beneath which the waters seemed to flow. On the beach the spray seems to rise in foam to the tops of these imaginary cliffs, while the houses, &c., attain a similar height. Ships, according to their distance, present different elevations, sometimes rising to twice their real height, at others the masts reach only a few feet from the deck; sometimes the upper sails seem double—a second set being seen at a considerable height above the first—while again a second vessel's hull, sails and all, is seen above the first; but in no instance is inversion observed, and the object thus refracted is always visible to the naked eye. The fogs do not appear to be injurious to health. The longevity of the inhabitants is indeed the best proof of the salubrity of Newfoundland; in no country is old age attended with greater bodily vigour and mental animation. There are instances of fishermen 100 years of age being actively employed in the arduous duties of their calling.

In 1829, Martin Galten was living at Marasheen island, Placentia Bay: he was then more than 100 years old, in excellent health, and caught with his brother that year nine quintals of cod fish. Seventy years previous he piloted Captain Cook into Placentia Bay. In the same place lived Nancy Zibeu, mother of four living generations. A Mrs. Tait died there in 1819, aged 125 years: she was with her third husband at the siege of Quebec by General Wolfe. Colonel Bonnycastle stated in 1842 that a woman died recently at Torbay, near St. Johns, aged 125 years, and before her death she sent for a doctor to see what was the matter with her poor child, who was sick, the said child being then 90 years of age.

The reports furnished to the "Horse Guards" and "Army Medical Board," confirm this view of the salubrity of the island. This official return states, that

"The climate of the southern portion of Newfoundland is similar to that of Nova Scotia, except that the summers are colder, of shorter duration, and liable to more sudden vicissitudes, owing to the melting of the icebergs on the coast, which exerts considerable influence on the temperature; the island has also been long noted for the frequent and dense fogs which prevail along its banks, and often continue during a great part of the summer. None of these agencies, however, seem to operate prejudicially

on the health of the inhabitants, among whom the mortality is on a lower scale than in any portion of the American continent.

"According to the population returns, the deaths are only 1 in 76 of the population—an exceedingly low ratio indeed, especially when it is considered that upwards of 20,000 are children under 15 years of age. As the inhabitants are scattered over a great extent of coast, several of the deaths may possibly have been omitted; but, even making all due allowance for that source of error, their rapid increase, without any material aid from immigration, furnishes sufficient proof that the climate, however unpleasant to the feelings, is highly favourable to the constitution.

"Had we drawn our conclusions in regard to the climate, however, from the mortality among the troops at this station, we should have been led to very different conclusions. Unfortunately, we cannot extend our observations on this subject to an earlier date than 1825, because, prior to that period, the garrison having principally consisted of two companies of one of the regiments at Halifax, their returns were frequently included with those of that station. Since 1825, however, a corps has been formed for service in this colony, consisting of three companies of veterans, who, although for the most part aged or disabled, have been reported as fit for garrison duty. These, with a company of artillery, have generally constituted the whole force, among whom the sickness and mortality has been as follows:—

Years.	Newfoundland Veteran Companies.			Royal Artillery.		
	Average Strength	Deaths.	Mean Sick	Average Strength	Deaths.	Mean Sick.
1825 .	321	18	20	61	4	4
1826 .	292	7	17	56	1	1.2
1827 .	310	8	18	62	...	2
1828 .	336	14	20	72	2	3.6
1829 .	275	15	12	69	1	2
1830 .	258	15	16	68	3	1
1831 .	239	16	16	65	3	2
1832 .	205	8	24	57	1	3
1833 .	189	7	10	55	...	1.3
1834 .	241	3	12	60	1	1.6
1835 .	255	11	12	66	1	2
1836 .	268	10	14	71	...	2.7
Total .	3,189	132	191	762	17	22.8
Ratio per 1000 of Strength }		41.	60.	...	22.	30.

"From this table it appears that the mortality among the veterans has been upwards of 41 per 1,000 annually, on the average of the last 12 years, while that of the artillery has been only 22 per 1,000 during the same period. The high ratio among the former may in part be accounted for by their advanced age, nearly one half being between 33 and 40, and the other half above that period of life; but it appears still more attributable to the immediate effects of intemperance, as the records of that corps furnish most startling evidence of the general prevalence and destructive consequence of this vice.

"In a nominal roll, transmitted to the medical department, of those who died between 1825 and 1832 in the veteran companies, we find the following causes of death recorded:—

Total deaths from 1825 to 1832 inclusive	100														
Whereof—															
Died by suffocation from drinking	10														
" delirium tremens	15														
" apoplexy, principally from intoxication	15														
Found dead, supposed from same cause	2														
Drowned	1														
Contusion	1														
	44														
Died by disease	56, viz.—														
By Fevers	<table> <tr> <td>Feb. Cont. Com.</td><td>1</td></tr> <tr> <td>" Typhus</td><td>1</td></tr> <tr> <td>Ptyrexia</td><td>1</td></tr> <tr> <td>Pneumonia</td><td>3</td></tr> <tr> <td>Phthisis</td><td>16</td></tr> <tr> <td>Catarrhus</td><td>17</td></tr> <tr> <td>Asthma</td><td>1</td></tr> </table>	Feb. Cont. Com.	1	" Typhus	1	Ptyrexia	1	Pneumonia	3	Phthisis	16	Catarrhus	17	Asthma	1
Feb. Cont. Com.	1														
" Typhus	1														
Ptyrexia	1														
Pneumonia	3														
Phthisis	16														
Catarrhus	17														
Asthma	1														
" Diseases of the Lungs	37														
" Diseases of the Liver	<table> <tr> <td>Hepatitis</td><td>5</td></tr> <tr> <td>Icterus</td><td>1</td></tr> </table>	Hepatitis	5	Icterus	1										
Hepatitis	5														
Icterus	1														
" Diseases of the Stomach and Bowels	<table> <tr> <td>Gastritis</td><td>5</td></tr> <tr> <td>Diarrhoea</td><td>2</td></tr> </table>	Gastritis	5	Diarrhoea	2										
Gastritis	5														
Diarrhoea	2														
" Dropsy	<table> <tr> <td>Ascites</td><td>3</td></tr> </table>	Ascites	3												
Ascites	3														
Total	56														

"Thus little more than one-half of the mortality among the veterans has been in any way attributable to natural causes, and as large a proportion might have occurred among persons at the same period of life, even in this country. The returns from this station are not sufficiently complete to admit of our detailing the diseases of the artillery with similar minuteness, nor even to carry the investigation relative to the veterans beyond 1832; but, as so large a proportion of the deaths has been traced to intemperance, many of the admissions into hospital are likely to have been attributable to the same cause; consequently, even if obtained, these returns, when subject to so manifest source of error, could have afforded no accurate data for determining the influence of this climate on the constitution of our troops.

"The fate of so large a proportion of this garrison, by their own imprudence in the use of spirituous liquors, affords a striking illustration of the progressive effect and ultimate consequence of long-continued habits of intemperance. In Nova Scotia, for instance, we find, that though this vice prevails to a great extent among the troops, the mortality is as low as can be expected in any climate, even among persons of abetious habits. But there the troops are, for the most part, men in the prime of life, whose excesses produce little sickness or mortality, while they have the advantage of youth on their side; but they are silently laying the seeds of disease in their constitution, and inducing premature old age and disability, so that by the time they attain the same advanced period of life as the veterans, a repetition of excesses, which might formerly have been

indulged in with comparative impunity, hurries them to an untimely grave.

"In regiments of the line, the number of men at an advanced period of life being but small, the premature deaths caused by drunkenness are lost in the mass, and add little to the general mortality. It is only when a corps is composed of men advanced in years that the ultimate consequences of this vice can be traced to their full extent, or so strikingly manifested as in the present instance."

The highest and lowest of the thermometer and barometer in 1841, registered by Sir R. Bonnycastle, was:—

Months.	Thermometer.		Barometer.	
	Highest.	Lowest.	Highest.	Lowest.
January	44.0	3.0	30.3	28.7
February	42.6	4.6	30.2	28.6
March	47.0	0.5	30.3	28.8
April	56.5	14.3	30.2	28.9
May	62.0	21.8	30.2	29.1
June	74.0	29.8	30.1	29.2
July	79.5	34.8	30.1	29.3
August	78.3	38.5	30.2	29.3
September	75.3	33.5	30.2	29.3
October	68.3	24.0	30.3	29.2
November	57.0	16.5	30.2	28.9
December	44.5	5.6	30.4	28.9

On the 15th February, 1841, during a severe storm from W.S.W., the thermometer fell from 40 to 19, and the barometer from 29.8 to 28.5.

The annual average of the thermometer and barometer for six years was as follows:—

Months.	Ther.	Bar.	Months.	Ther.	Bar.
January	22.7	29.6	July	57.4	29.7
February	42.6	29.6	August	58.3	29.8
March	24.0	29.7	September	53.3	29.8
April	33.8	29.6	October	44.0	29.8
May	39.5	29.7	November	34.0	29.6
June	49.8	29.7	December	26.0	29.6

The Newfoundland almanac for 1845 gives the following comparison of the barometrical and thermometrical averages in Newfoundland and England; the averages are the mean of observations for six years:—

Months.	Barometer.						Thermometer.					
	Mean Height.		Highest.		Lowest.		Mean Temp.		Highest.		Lowest.	
	N.	E.	N.	E.	N.	E.	N.	E.	N.	E.	N.	E.
January	29.68	29.72	30.35	30.77	28.73	28.83	22.7	36.0	44.0	52.0	3.0	11.0
February	29.72	29.76	30.24	30.82	28.69	29.17	19.75	33.0	42.67	53.0	4.67	21.0
March	29.74	29.84	30.34	30.77	28.82	28.87	21.0	43.9	47.0	66.0	0.5	24.0
April	29.66	29.88	30.26	30.54	28.91	29.20	33.8	49.9	56.5	74.0	14.3	29.0
May	29.76	29.80	30.22	30.38	28.13	29.65	39.5	54.0	62.0	70.0	21.8	33.0
June	29.77	30.02	30.14	30.46	29.22	29.60	49.8	58.7	74.0	90.0	29.8	37.0
July	29.79	29.87	30.18	30.30	29.37	29.39	57.4	61.0	79.5	76.0	34.8	42.0
August	29.83	29.89	30.21	30.26	29.35	29.35	58.3	61.6	78.3	82.0	38.5	41.0
September	29.83	29.93	30.29	30.41	29.32	29.41	53.3	57.8	75.3	76.0	33.5	36.0
October	29.89	29.77	30.31	30.61	29.26	29.74	44.0	48.9	68.3	68.0	24.0	27.0
November	29.67	29.77	30.27	30.27	28.90	29.08	34.0	42.9	57.0	62.0	16.5	23.0
December	29.66	29.69	30.40	30.52	28.98	29.12	26.40	39.3	44.50	55.0	5.66	17.0

CHAPTER III.

GOVERNMENT, REVENUE, POPULATION, RELIGION, EDUCATION, AND CRIME.

GOVERNMENT is administered under a constitution granted in 1832, and subsequently modified in accordance with the responsible system which exists in the other North American colonies. The executive council consists of nine members, who also compose the legislative council. The House of Assembly consists of fifteen representatives. St. John's returns three members, Conception Bay four, and the other districts one each. The elective franchise was conferred in 1832 on the whole male population occupying dwelling-houses either as owners or tenants for one year.

Judicature and Police.—The official report on this subject in 1848 is complete:—

"The Supreme Court is constituted under the imperial statute, 5 Geo. IV. c. 67, and the Royal Charter issued in pursuance of the statute. It is composed of a chief justice at a salary of £1,200 sterling, and two assistant judges, each at a salary of £700 sterling, secured by Act of the Legislature. The Court has jurisdiction throughout the whole government of Newfoundland and its dependencies, and on the seas and banks to which vessels resort for carrying on the fishery, and has all criminal and civil jurisdiction, as fully and amply to all intents and purposes, as the Queen's Bench, Common Pleas, Exchequer, and High Court of Chancery in England, and is also a Court of Oyer and Terminer and General Gaol Delivery. The Court sits only at St. John's, the capital of the island, at such times as the governor by his proclamation may appoint. The terms rarely exceed two, one in spring and one in autumn, for a period of about three or four weeks each. All civil actions, in which the matter in dispute exceeds forty shillings, are tried by jury. The practice on the common law side is in general the same as that of the Court of Queen's Bench, modified by rules adapted to the circumstances of the colony. The practice on the equity side is governed by a code of rules, subject to which modification, the practice of the English Court of Chancery prevails. In prosecutions for breaches of the laws relating to trade and revenue, the Supreme Court proceeds according to the rules and practice of the courts of Vice-Admiralty. This Court alone, is also invested with the power of granting probates of wills and letters of administration, and with the control of the persons and property of infants and lunatics. An appeal lies from the Supreme Court to the Queen in Council, where the matter in dispute exceeds £600. The officers of the court are the chief clerk and registrar, at a salary, in lieu of fees, of £350 sterling, (lately reduced from £500) who is also by virtue of his office, Registrar of Deeds for the central district, appointed by warrant under the Royal Sign Manual. A crier, at a salary of £60 sterling, appointed by the chief justice for the time being, both salaries voted annually by the Assembly.

Circuit Courts.—The island is divided into three judicial districts, the central, northern, and southern, within which, respectively, there is a superior Court of Record, styled the Circuit Court, held by the chief or one of the assistant judges of the Supreme Court. This Court has the same jurisdiction, powers, and authority within the district as the Supreme Court throughout the whole island, save in cases of treason, and capital felonies, and in prosecutions for breach of the revenue laws.

"The Circuit Court for the central district (or district of St. John's) sits at the town of St. John's only. Its terms generally precede those of the Supreme Court in spring and autumn, and last for periods of about four weeks, and its practice is the same as that of the Supreme Court.

"The Circuit Court for the northern circuit sits twice in the year at Harbor Grace for periods of about four weeks in spring and autumn; and once a year during the months of September and October at the following places, viz.:—Twillingate, Fogo, Greenspond, Bonavista, and Trinity, for periods of a week or 10 days at the respective places.

"The Circuit Court for the southern district sits once in the year only, at the following places, during the months of September and October, viz., Harbor Briton, Burin, Placentia, St. Mary's, and Ferryland.

"The terms and places of holding the Circuit Courts are annually fixed by the governor's proclamation. The practice of the northern and southern Circuit Courts is governed by a code of rules adapted to the state and circumstances of the outports. An appeal lies from the Circuit Courts to the Supreme Court in matters exceeding £50 sterling. Each of these Courts has a clerk, (who is also the Registrar of Deeds within the district,) appointed by warrant and under the Royal Sign Manual at a salary of £200, and fees amounting in the northern district to £150 or £180, and in the southern district to less than £50.

"Courts of General and Quarter Sessions are also held at St. John's and the principal outports, the sittings of which are regulated by the governor's proclamation. The English Criminal Law being in force in the colony, these Courts and the magistrates have (so far as the law can be applied) jurisdiction and powers similar to those of the quarter sessions and justices of the peace in England. Trials, however, by jury, in criminal cases, with occasional exceptions at St. John's, always take place in the superior Courts. The courts of Session have also a summary jurisdiction in the recovery of debts for sums not exceeding 40s.; in disputes relating to the curing of fish to the amount of £5, and concerning the wages of seamen and fishermen, hiring of boats, and the supply of bait to an unlimited amount. These courts are presided over by the stipendiary magistrates, of whom there are three at St. John's at salaries of £300 sterling each, two at Harbor Grace at salaries of £180 and £150, and one at each of the 13 other outports at salaries varying from £100 to £150; the total cost being £2,930 sterling, voted annually by the Assembly.

Sheriffs.—There are three sheriffs, one for each of

the judicial districts, at salaries of £750 for the central, £300 for the northern, and £200 for the southern district, secured by an Act of the Legislature. The sheriffs are appointed annually by the governor.

"Clerks of the Peace."—There are 11 clerks of the peace, one at St. John's at a salary of £300, one at Harbour Grace at a salary of £150, and one respectively at Brigus, Ferryland, Placentia, Burin, Harbor Briton, Trinity, Bonavista, Carbonear, and Twillingate, at salaries from £35 to £60 without fees. Their salaries, with the exception of that of the clerk of the peace for St. John's are voted annually by the Assembly. The clerks of the peace are appointed by the governor.

"Constables."—There are, at various places throughout the island, in all, 66 paid constables, at an annual stipend varying from £12 to £45, with the exception of the high constable at St. John's, who has £80, and at a total cost of £1,394 sterling, voted annually by the Assembly. These are all the constables of the island, there being none who serve gratuitously.

"Gaolers."—There are six gaolers, one at St. John's at a salary of £150, one at Harbour Grace at £90, and one respectively at Ferryland, Placentia, Burin, and Trinity, at £25 each (in lieu of fees), voted annually by the Assembly. There being no local rates or assessments in the different districts, the whole expense of the administration of justice, support of the

poor, and for other public services and works, is defrayed out of the public revenue."

POPULATION.—In consequence of the extensive fisheries carried on along its coasts, the population of Newfoundland necessarily fluctuates. Until recently there has been no accurate census. In 1785, the resident population was estimated at 10,224; in 1806, at 26,505. Since 1822, as follows:—

Years.	Males.	Females.	Total.	Marriages.	Births.	Deaths.
In 1822.	31,746	20,401	52,157	516	1,675	735
" 1827.	34,617	23,471	58,088	442	1,879	696
" 1836.	41,467	32,238	73,705	—	—	—
" 1845.	52,274	44,232	96,506	—	—	—

According to a census taken in 1825, of classes, there were of masters, 6,131; mistresses, 6,211; men servants, 11,537; women-servants, 4,210; children under 15 years, 20,204. The number of French on the coast was then stated to be 12,000.

The census of 1836 contains the following:—

Districts.	No. of Dwelling-houses.	Family.						Total Population.
		Males.			Females.			
		Under 14 years.	14 to 60 years.	Upwards of 60 years.	Under 14 years.	14 to 60 years.	Upwards of 60 years.	
St. John's	2,781	3,718	4,984	166	3,611	4,123	201	18,926
Conception Bay	3,521	4,971	5,289	202	4,452	4,842	261	23,216
Trinity Bay	959	1,546	1,565	108	1,372	1,320	110	6,803
Bonavista Bay	801	1,182	1,149	98	1,059	1,010	71	5,183
Fogo and Twillingate	703	1,124	1,059	87	1,101	872	59	4,886
Ferryland	679	882	1,223	77	758	878	53	5,860
Placentia and St. Mary's	712	1,024	853	68	989	925	49	4,701
Burin	461	639	664	35	644	605	32	3,140
Fortune Bay	454	680	600	69	623	604	28	3,129
Totals	11,071	15,766	17,386	910	14,609	15,197	864	75,843

The latest census of Newfoundland, dated 1845, gives the following results:—

Census of 1845.	Males.	Females.	Total.
St. John's	13,177	12,019	25,196
Conception Bay	14,899	13,127	28,026
Trinity	4,687	4,112	8,799
Bonavista	3,943	3,284	7,227
Fogo	3,771	2,973	6,744
Ferryland	2,623	1,968	4,591
Placentia and St. Mary's	3,578	2,895	6,473
Burin	2,845	1,873	4,718
Fortune Bay	3,109	1,991	5,100
Total in 1845	52,274	44,232	96,507

At present, the population is upwards of 100,000. At St. John's, society is composed of the same classes as in other British settlements. Along the coasts many of the colonists employ themselves in farming as well

as in fishing; and since the period that attention has been paid to religion and education—aided by temperance societies—the population has become far more orderly and continuously industrious than they were in by-gone times.

When Newfoundland was first visited after the general discovery of the continent of America, it was found to contain two distinct races of men—the one termed *Red Indian*, the other the *Esquimaux*; both are now almost extinct, the former perhaps entirely so, as recriminating hostilities were waged between them and the early settlers, who shot and speared each other whenever an occasion presented itself. The destruction of the Red Indians was not owing solely to the occupation of the island by Europeans, but to the exterminating war of the Mic-Macs.

Military Defence.—There are 11 harbour batteries. There is no militia or local corps. The military defence is defrayed entirely by Great Britain, and amounted, in 1848, to £27,474. Fifty pounds are allowed by the colony towards the payment of the duties on wines imported or purchased annually for the use of the military.

Ecclesiastical Establishment.—In 1839, Newfoundland, which until then had been a part of the diocese of Nova Scotia, was, with the Bermudas, erected into a separate see. The established church has 32 clergymen, 18 parsonage houses, 64 churches, or places for the celebration of divine service. Of Roman catholic chapels there are 35. There are about 30 dissenting places of worship, of various denominations. Of the reformed religion, the class the most numerous, and by far the wealthiest, is that of the church of England; they number 34,281 persons. Next to them, in point of number, are the Wesleyans, of whom there are 14,239 persons: their establishment consists of 13 ministers, and they have 34 places of worship. The Presbyterians of the church of Scotland number 576 persons, and they have one minister resident in St. John's, and one place of worship. There is likewise a congregational church at St. John's, and one resident minister; this section numbers 394 persons. The Roman catholic population number 46,785 persons; they have 42 churches, and a cathedral at St. John's, not yet consecrated. Their establishment consists of a bishop and 24 clergymen. To the bishop, a salary of £75 a-year, drawn from the North American clergy estimate, was formerly assigned; but that sum, by a vote of the House of Commons in the past year, was raised to £300.

The census of 1836 shows:—

Districts.	Schools.	Male Pupils.	Female Pupils.	Protestant Episcopal.	Protestant Dissenters.	Roman Catholics.
St. John's	37	1,041	1,379	3,813	1,057	14,056
Conception Bay	22	621	492	6,819	6,333	10,063
Trinity Bay	2	158	127	4,098	1,639	1,066
Bonavista Bay	6	128	136	3,473	461	1,249
Fogo and Twillingate	1	48	36	4,022	45	819
Ferryland	6	133	105	313	—	4,798
Placentia and St. Mary's	4	80	90	710	6	3,985
Burin	1	8	12	671	1,095	1,374
Fortune Bay	—	—	—	2,812	—	308

EDUCATION.—There is a male orphan asylum with 470 children; six grammar schools and academies, under the control of the local government; 40 schools established by the "Newfoundland and British North

American School Society," on the Madras system, with about 2,784 male and female pupils in 1848, to which the local government subscribed £500 per annum; and eight schools under the Wesleyan methodist connexion, to which the local government contributes £250 per annum. There is a "presentation convent school," with 400 female children, conducted by 11 ladies, nuns of a religious order. The superior, Mrs. Risevare, superintends under the Roman catholic bishop for the time being. Dr. Fleming, the present Roman catholic bishop, has, it is said, hitherto supported the establishment, with the exception of an annual grant from the colonial legislature. Since the fire of 1846 the number of pupils has not exceeded 500. A want of accommodation alone prevents a much larger attendance: the Blue Book for 1848 states, that

"Under an Act of the local Legislature for the encouragement of education in the colony, elementary schools have been established in every district in the island. By the provisions of this Act of the Legislature, power is given to the governor to constitute in each district two separate and distinct Boards of Education, Roman catholic and protestant; by nominating seven respectable inhabitants of each creed to each section. One resident clergyman of each persuasion being *ex officio* a member of his respective Board, and to their care the regulation and supervision of these schools is entrusted.

"The scheme for the government of these schools has been found to be both efficient and satisfactory. The amount expended in furtherance of this object for the year 1847, was £6,067. His Excellency rightly adds, that in the present state of the great mass of the population of the colony, consisting, as it does, of simple and hardy fishermen, the subjects of instruction must necessarily be of a simple and elementary nature. For the benefit of this class the colonial grant is given, a separate provision having been likewise made for those, whose children require a higher education, it being the intention of the Legislature to provide for the education of the sons and daughters of fishermen; of children that are to live the same simple, laborious, and honourable life as their parents are now doing. For it should not be lost sight of that the instruction must always have reference to the station in life which the child is hereafter to fill, the two-fold scope and object of all education being first to impart to the child that practical knowledge of his duty to God and man, and of the grand purpose of his existence here, which may, through his mercy, ensure his present and eternal happiness, and secondly, to convey that secular instruction which may best enable him to perform the part assigned to him among his fellow-men for their mutual good."

The census of 1845 shows 209 schools:—

Conducted by Masters.		Conducted by Mistresses.		Total.
Male Pupils.	Female Pupils.	Male Pupils.	Female Pupils.	
5,468	3,574	358	866	10,266

The Press and Institutions.—There are twelve newspapers published in the colony, viz.—ten at St. John's, and two at Conception Bay. There is a chamber of commerce, an association of underwriters, a gas-light company, two public libraries, fire companies, agricultural, benevolent, law, and other societies, &c.

Roads and bridges are under construction or repair in every district of the colony, and a large part of the revenue is being devoted to this important purpose. A colonial legislative building is constructing at St. John's, at an estimated expense of £15,000, and a market at £7,000; £9,000 had been spent on the former, and £4,000 on the latter up to 1848.

Crime.—There are three prisons, viz., at St. John's, Harbour Grace, and Ferryland; and the number of prisoners in confinement at Michaelmas, 1848, was nine males and one female; of felons there were, tried, males, five; females, three. Untried, males, six. The number of debtors was 19. The tried misdemeanours were, males, 78; females, 3. Untried, males, 31; females, one. Of the total number of prisoners committed during the year 17 were under 18 years of age; of those who could not read or write, 34 were males and 6 females.

Revenue.—The sums collected in 1828 from customs, duties, rent of crown lands, licences, &c., amounted to £15,972; in 1836 to £35,222; in 1843 to £50,884; in 1847 to £69,049.

The revenue of Newfoundland for 1848 and 1847 was—

Heads of Revenue.	1848.	1847.
	£	£
Under imperial acts	5,783	6,211
„ colonial acts	48,154	52,127
Light dues	1,627	1,728
Land sales and rents	1,156	382
Licences, fines, &c.	574	534
Fees of public offices	1,204	832
From N. A. clergy establishment	800	800
By loan under colonial acts . .	...	1,885
Parliamentary grant for fire sufferers . . . . .	...	4,160
Drawn from treasury for expenses on a shipwrecked vessel . . }	...	387
	59,300	69,049
Expenditure	62,711	74,873

The civil department cost, in 1848, £5,921; Customs estimated, £7,580; Judi-

cial, £6,580; police and magistracy, £5,574; ecclesiastical, £800; legislative, £119 (in 1847, £3,317); printing and stationery, £492; gaols, £721; coroners, £200; relief of poor, £9,700; education, £5,128; interest on loans, £4,328; loans paid, £5,400; and various other items, including rewards amounting to £25, for killing wolves. The governor has a salary of £3,000 a-year, with a house, and £200 for fuel and light, and a private secretary £200; colonial secretary, £500; treasurer, £500; surveyor-general, £500; collector, £800; chief judge, £1,200; two assistant judges, £700 each; attorney-general, £450; registrar of supreme court, £350; sheriff of central district, £750; ditto of northern, £300; ditto of southern, £200; three stipendiary magistrates at St. John's, £300 each; two at Harbour Grace, £300 and £180 each: one at Carbonear, Brigus, Trinity, Twillingate, and Bonavista, each £150; and eight others at salaries of £100 to £130 each. At St. John's, a high constable, £80; eight other stipendiary constables, £360; and in the other districts, stipendiary constables, whose salaries amount to £954 per annum. The Protestant bishop has £500; the Roman catholic bishop, £300. The Protestant bishop receives also £900 from the "society for promoting the gospel in foreign parts."

A recapitulation of the establishment in 1848, shews:—

Heads of Expenditure.	Paid by Gt. Britain.	Paid by Colony.
	£	£
Civil establishment . . . . .	..	10,321
Contingent expenses . . . . .	..	3,180
Judicial . . . . .	..	11,134
Contingent . . . . .	..	1,020
Ecclesiastical	800	—
Miscellaneous . . . . .	...	36,096
Pensions . . . . .	...	159
Totals	800	61,911

Coins.—British money and Spanish dollars, established by the governor's proclamation at 4s. 4d. sterling, but passing current at 5s. The amount of coin in circulation is estimated at £80,000 to £100,000. The greater part of the trade of the colony is effected by barter.

Paper Money.—Quantity not known; the bank of British North America has a branch at St. John's, and it is the only bank in the island.

CHAPTER IV.

VEGETABLE AND ANIMAL KINGDOMS, AGRICULTURE AND FISHERIES, COMMERCE, TARIFF, SHIPPING, &c.

THE VEGETABLE KINGDOM differs but little from that of the adjacent continent. The interior is supposed to be covered with vast forests; on the east and south coasts the trees are smaller than those growing in the same parallel on the main land, owing to the exposure to the sea and tempestuous weather, but on the W. and N.W. the trees are thickly planted and of considerable size. Of the conifera, the most prominent are the spruces, viz. the *pinus balsamea* or Canada balsam spruce, which reaches the usual height of its species, 30 feet; the *pinus nigra*, or black spruce, grows well at St. George's Bay, as does also the *pinus alba* or white spruce. The *pinus rubra*, red pine, grows about 30 feet in height. The *pinus penidula*, black larch, and *pinus microcarpus*, red pine, (the *larix Americana* of Michaux), are the most useful of the island forest trees. The timber of the black larch is very solid, strong, and lasting. Excellent brigs and schooners are built in Newfoundland, entirely of the island timber, except the planking, which, as there are no saw mills to prepare, can be procured cheaper from the continent. The consumption of spruce and pine in the island for fishing stages, or places to dry the fish on, is enormous. These erections are formed at the edges of harbours, by uprights of great length, and cross beams from the hill side, forming a platform, which is then loosely covered with the boughs and branches of the pines, so as to admit air from beneath. The steep iron-bound coast renders the construction of these stages absolutely necessary for the prosecution of the trade; the abundance of timber enables the fishermen to erect them at every available spot. The birch tribe are all common, the beech and elm are rare, the *Ostrya Virginica*, iron or lever wood, exists on strong lands. The balsam poplar, trembling or aspen leaved, and the Lombardy poplar, flourish pretty well. The Canadian yew is sometimes of considerable size, the willow thrives well and attains a large size; the mountain ash grows 15 to 20

feet high. The dog wood is plentiful, but is merely a bush.

The timber is larger and more varied at St. George's Bay, the Bay of Islands, and in the country around the Grand Pond, than in any other part of the island. The Bay of Islands has long been a valuable resort for the ship builder, and the whole coast to the northward to the beautiful double bay of Ingornachoix is equally capable of supplying timber for the same purpose. The fir, pine, ash, beech, birch, and juniper (the latter not the shrub of that name, but a larch) are all to be obtained in the interior of the island. The country about the river Humber is densely covered with fine woods. Dr. Chappell describes the banks of the St. George's or Main River as composed of loose earth, covered with various lichens, and surmounted with whole forests of black and white spruce, larch, fir, and birch. There is an immense variety of recumbent and trailing evergreens, and the berry-bearing shrubs clothe every swamp and open tract; the whortleberry, cowberry, hawthorn, partridge berry, trailing arbutus, raspberry, strawberry, and a small kind of prickly gooseberry—carpet the soil in desert places. Sarsaparilla (*aralia mediculus*) is produced in the woods. Mr. Jukes notices that after the forest is burned down, a crop of wild raspberries springs up, and is succeeded by birch trees; and he also speaks of good currants, raspberries, and gooseberries growing in the garden hedges, and wild in the woods. "At one part," he says, "of Lark Harbour (Humber Sound) where there had been one or two temporary huts and cleared spots, the raspberries were in the utmost profusion, and were equal both in size and in flavour to the best garden raspberries of England. Currants were found pretty plentifully, also chiefly on the cliffs, or wherever there was a broken bank with rocky ledges. They were both red and black, and of a different species from our English currant, being covered over with small spines like the rough red gooseberry; the branches, too, had occasionally a soft

thorn. The flavour was rather harsh, but still very agreeable, especially when made into puddings." The wild gooseberries are more rare; the fruit is small and sweet, precisely like the small rough red English gooseberry. The wild or choke-cherry is a very ornamental tree, the bunches of minute yellowish-white fragrant flowers are followed by long pendulous grape-like fruit, placed on a stalk resembling currants. The fruit is first of a dark red colour, and when ripe, black,—pleasantly astringent, and devoured greedily by birds. The Kentish cherry thrives with care at St. John's. The wild plum, and the prunus depressa are common in the woods. The hop thrives near gardens; the melon is reared, and the cucumber and vegetable marrow without much difficulty. The garden strawberry and raspberry are excellent. The apple, pear, and plum do not arrive at great perfection on the east side of the island; but cabbages, cauliflowers, brocoli, lettuce, spinach, cress, beet, parsnips, carrots, peas, Windsor beans, French beans, celery, thyme, mint, savory, and all the British culinary vegetables and herbs arrive at great perfection. Sir R. Bonnycastle says in reference to the remarkable yield of potatoes, that "from one rowan potato cut into pieces he had a crop of 108 good sized tubers." The potato disease reached Newfoundland in 1846-7, and caused great destruction.

There are three species of rose, natives of Newfoundland; this beautiful flower grows in rich profusion; *rosa blanda*, with its slender purple-red branches, flourishes in the vicinity of streams. The moss, damask, maiden's blush, and Provence rose thrive well in gardens. The moose wood, or heather wood shrub (*dirca palustris*) produces yellow flowers, and a small yellow berry; its bark is flexible, strong, and well adapted for withes to tie packages. Violets are common, but inodorous. In the tribe of lilies, says Sir R. Bonnycastle, "Solomon in all his glory exceeded not the beauty of those produced in this unheeded wilderness. *L. Philadelphicum* is almost the same in appearance as the common orange lily; *L. Superbum* ornaments some of the ponds, and is orange with dark blue spots; *L. Canadense* also grows in wet places, and has a collection of yellow or reddish flowers maculated darkly. The *Iris* or wild flag, is a superb flower, and very common in Newfoundland, its rich blue dotting every marshy place in the flowering season. *Sisyrinchium anceps*, or the blue-eyed grass, also assists the rich display."

The guelder rose is a native of the country: the "hearts-case" once planted in a garden are with difficulty extirpated. The lily of the valley, Solomon's seal, the campanula, convolvulus, Jacob's ladder, honeysuckle, the painted herb, fox-glove, columbine, wild lupine, potentilla, cowslip, yellow and white water-lily, and other flowers, charming and common to England, are found either wild or cultivated in Newfoundland. In sheltered gardens, the dahlia does well by covering its roots in winter. Perennials thrive better than annuals, on account of the shortness of the summer. In general, the flowers are larger and more spread than those of Europe, but not so odorous. The "pitcher plant," or lady's saddle, with its large, handsome, purple flowers, is the natural production of the swamps. The leaves are tubular, or pitcher-shaped, and always filled with about a wine-glass of the purest water: the receptacles are lined with inverted hairs, which prevent the escape of insects, many of whom find their graves in the pitchers, and are supposed to serve for the food of the plant. The lids expand or shut, according to the necessities of the plant, and the pitchers are of so strong a texture, that they bear heat enough, for some minutes, to boil water in them.

There is a very great variety of European and American grasses; the juncus, or reed tribe, are numerous, and the lichens and ferns afford a fine field of research for the botanist. One of the most beautiful of the ferns, termed the "maiden hair," (*adiantum pedatum*,) is a little trailing plant, bearing a small white fruit, like the egg of an ant, which contains so much saccharine matter as to be lusciously sweet when preserved. Natural red and white clover, and the vetch, cover the sandy banks near the sea, in Newfoundland and Labrador, to such an extent, especially in Labrador, that vessels requiring fodder, send their boats ashore to gather this rich natural crop. These details, although they refer to but a part of the vegetable kingdom of Newfoundland, are sufficient to disprove the assertions by which it was so long misrepresented as a barren region of fog, ice, and snow, adapted only for the temporary residence of cod fishers and seal hunters.

ANIMAL KINGDOM.—The deer, bear, wolf, fox, hare, marten, dog, wild cat, rat, and mouse, constitute the chief land quadrupeds of Newfoundland with which we are acquainted. Of the deer tribe there are several

varieties: the *caribou*, or *rein-deer*, is a very large animal, with immense antlers; their paths, which resemble sheep-walks, are found all over the country; the foot-marks are like those of a cow, but wider and larger. The moss on which they feed is abundant. During the early part of summer they separate into pairs, and hide themselves in the recesses of the woods. In September and October they are in the best condition, and migrate from the north towards the south, swimming in herds across the lakes and arms of the sea. Formerly, the herds that came to the south coast are stated to have been enormous. Mr. Bagg, of La Froile, says he has seen "thousands," and has killed seven at one shot, with heavy slugs, from a large sealing gun. About March they remigrate towards the north. The flesh is soft, juicy, and tender, and is sold in St. John's, during winter, for fifteen shillings a quarter. This useful animal might be domesticated in Scotland.

Black bears are becoming scarce; they are the long-legged variety, with a pointed muzzle, of a terrier's spot colour, and very large. They live principally on berries; will run from a man, and are not savage, except when wounded. They appear to be fond of pork and molasses; and, in winter, will approach lone houses in the woods in search of food. The white, or polar bear, occasionally lands from the ice at Newfoundland. A fine one was recently killed near St. John's, while endeavouring to make his way across the country, from the east to the west coast.

The wolf is a large and very powerful animal, grey on the back, and yellow beneath. They rarely, if ever, attack men, or even children, but will dodge the steps of a traveller—one or more on each side of him—ready to take advantage of any accident which may befall him. Mr. Lane, of Freshwater Bay, walked, on a winter evening, up Gambo Pond, on the snow, to visit a person living at the head of the pond. On his return, the next day, he found the tracks of two wolves, one on each side of his own foot-marks, who seemed to have methodically accompanied him. The tracks, every now and then, separated for about 100 yards; then, at regular intervals, closed in again on his track. They appeared to have followed him one on each side, in order to come on his track should he diverge, while they met occasionally, to be sure he had not passed them. A wolf is more than a match for a Newfoundland dog. Large numbers of

deer and some young cattle are destroyed by these rapacious animals, for each of whose heads a reward of £5 is given by the colonial government.

The Fox is tolerably abundant; besides the common yellow or reddish, there are the black, silver, blue, and white foxes. The black and silver are much valued for their fur.

The Hare in some parts is plentiful, of a large size compared with those in England; it becomes of a dirty white in winter.

Martens are now becoming scarce; they are considered by some farmers excellent eating, but taste too much of spruce and other woods.

The Dog, so celebrated for its beauty, sagacity, and fidelity, appears to be much neglected in Newfoundland; at St. John's and its neighbourhood they are described by Mr. Jukes as the most ill-looking set of mongrels that can be conceived. In the outports the breed is said to be better preserved. Colonel Sir R. Bonnycastle says, that at the Twillingate islands on the north coast there are still some splendid dogs to be found: they are of two kinds, the short wiry-haired Labrador dog, and the long, curly-haired Newfoundland species, generally black, with a white cross on the breast. Their habits adapt them as much to the water as to the land. The common dogs used in the catamarans are of every possible cross with these, and of every variety of colour and fur. They all appear to prefer fish to any other food, and seem stoically indifferent as to whether it be fresh, salted, or putrid. The spotted mahogany-coloured short-haired Labrador dog, is said to be the most attached to man, and the best house guardian; the other variety with bushy, curling tail, the best water dog; both endure the extreme cold, and prefer a snow bed to any sheltered sleeping-place. The whole race appear to be particularly fond of children: but the Labrador dog, if not well fed, is a sheep biter and a dexterous thief. Newfoundland and Labrador dogs, when removed to a warmer climate are subject to glandular swellings in the ear, which require lancing; they are seldom attacked with hydrophobia, and it is said when ill and past cure they frequently retire to woody or secret coverts to die unobserved.

The Beaver is found only in the interior of ponds and marshes.

The Musquash (*fiber zibeticus*) or muskrat, whose habits are like those of the

beaver, is abundant; the tail is thick and round, whereas the tail of the beaver is like a trowel.

The common Rat is destructively numerous.

The wild Cat is found only in the interior.

Birds are numerous in the interior; among those known are the osprey or sea-eagle, the hawk tribe, owls in amazing number and variety, particularly the snow white and the light gray; among the pie family, the raven as elsewhere attends the labour of man; the crow frequents the fields, and a variety of the blue jay is known. Two kinds of woodpeckers are occasionally seen, one the speckled sort. The Newfoundland blackbird is supposed by Sir R. Bonnycastle to be the rose-coloured ouzel, and is called in the island a robin, though as large as a blackbird. The martin stays about ten weeks in summer; the yellow willow wren is very common, and the little wren is seen; the ferruginous thrush, fly-catcher, yellow-breasted chatterer, little black-cap, titmouse, the grossbeak, the snow bird resembling an ortolan, and the sparrow, the latter not of the true genus, are all, with various other species of the winged tribes, found in Newfoundland. Ptarmigan are in abundance; they are very like the Scotch grouse, and there is said to be little specific difference between the red grouse, gorcock or moorcock of Bewick, (*tetrao Scoticus*) and the ptarmigan of Newfoundland, which must not, however, be confounded with the arctic or northern ptarmigan (*tetrao lagopus*), both turn white in winter; but the Newfoundland bird has a rufous brown plumage, mixed with white in summer. Three of these birds shot near Trepassy, on the 10th of May, weighed together five pounds thirteen ounces and a half. One cock bird, shot 21st January, with nearly white plumage, weighed twenty-eight ounces. They are much used for the table, roasted and made into white soups. Of the grallæ there are two or three species; of plover, the golden and the grey; the bittern, long-billed curlew, snipe, whimbrel, and sand-piper are common.

Of *water birds* there are the Canada and snow goose, blue-winged teal, shoveller or great brown duck; widgeon and mallard frequent the interior ponds; and varieties of sea birds, among others the gull, lazy cormorant, baccalao, pin-tailed duck or sea pheasant, eider duck, kittiwake, tern, ice-bird or sea dove, goosander, noddy, divers or loon, auk, puffin, and razor-bill, the coast. The Newfoundland goose is a remarkably

elegant bird, with a swan-like form and a black ring round its neck; it is easily domesticated but does not breed. In winter many arctic birds frequent the coast; but the large auk or penguin (*alea impennis*), which less than half a century ago was a sure sea-mark on or within the edge of the Newfoundland bank, has disappeared, from the destructive trade carried on for their eggs and skin. They are about the size of a goose, with a coal black head and back, a white belly, and a milk-white spot under the *right eye*. Their wings are more like fins, and have down and short feathers on them. The auks are said to have no thumbs like the South Sea penguins.

Reptiles.—There is a total absence of venomous reptiles; even toads, frogs, or lizards, which are abundant on the neighbouring continent, are unknown in Newfoundland.

Insects, such as mosquitoes, stinging midges and flies, are in myriads.

Amphibia.—The morse or sea-horse (*trichicus rosmarus*) formerly abounded on the coast of Newfoundland and on the straits of Belle-isle, but has been destroyed for its blubber and hide, the latter being used for coach traces. The morse is larger than an ox, has been seen 20 feet long, covered with short yellow hair, and has two canine tusks in the lower jaw, 2 feet long, pointing downwards.

The *seal* abounds around Newfoundland; they are killed on the ice with clubs, in thousands. The cries of a young seal are like those of a child in extreme agony, and are something between shrieks and convulsive sobbing. These cries seem to be the amusement of the young seals when left alone on the ice; and the same cry is used to express enjoyment or pain, fear or defiance. The young seal is of a dirty white colour. The common seal (*phoca bitulina*), is of a yellowish-grey or brownish, with yellow spots, becomes white from age, and is from three to five feet long. The hooded seal (*phoca cristata*) is of a dark grey colour, with many irregular shaped spots and blotches of considerable size, seven to eight feet long, with a piece of loose skin on it which can be inflated and drawn over the eyes, and is nearly ball proof. It has the power of distending its nostrils, which gives it a formidable appearance. The harp seal is so named from the old male animal having, in addition to a number of spots, a broad curved line of connecting blotches proceeding from each

shoulder, and meeting on the back above the tail, something like an ancient lyre. The female has not the harp; she leaves her young on the ice and returns from fishing occasionally to suckle them; the milk is of a thick creamy consistence, and of a yellowish-white colour. The "square flipper" seal is rarely seen off Newfoundland; it is said to attain a size of 12 to 15 feet.

Cetacea.—The whale, grampus, and porpoise abound. The true Greenland *balæna* or toothless whale, of which seven species have been observed, do not often visit the Newfoundland waters: they vary in size from 45 to 70 feet, and the quantity of oil yielded is in proportion to the longest blade of whalebone, one foot giving one gallon and a half, and 12 feet 21 gallons. The inferior jaw bone sometimes measures 25 feet. It has a black skin; the gray whale is longer than the above mentioned. The *balænoptera*, or finned whale, with a horny fin on the lower portion of the back, is sometimes more than 100 feet in length. The beaked whale is only about 25 feet long; it has pouches or folds of fat on its throat and belly. The broad-nosed whale attains a huge length. The cachelots, or whales with teeth in their lower jaw, have an immense head, which is frequently in size one-half or more than a third of the whole animal; the *physeter* species attains an almost incredible length; on good authority it has been seen 144 feet in length; the usual size is 60 feet. It feeds on the hump fish, cuttle, dog-fish, and even small shark; the toothless whale feeds on molluscæ, or gelatinous matter. The toothed whale furnishes spermaceti, which is found below the nose or snout. The trumpo, blunt-headed, or New England cachelot, has an enormous head, the upper jaw has 18 teeth, is five feet longer than the lower; length of animal 60 feet; it is very ugly, bold, and swift, and opens its huge jaws in fight like the hippopotamus. It yields a very fine, pure oil, which is obtained in cells near the brain, and is procured by boring the skull. On the coast of Newfoundland, in the Gulf of St. Lawrence, and on the Labrador shore, cetacea of all sizes are seen, from the *physeter malar*, or great finned cachelot whale, with its huge back fin, like the mast of a ship, down to the porpoise. The whale fishing is now becoming an important branch of trade for the colony. The monadons or narwals, the unicorns of the deep, are furnished with a piercer or tusk, and called sword fish; some are single-

sworded, 13 to 16 feet long, others double sworded, 12 to 25 feet long. The Esquimaux value their flesh and oil as aperients. The sword grampus, a species of dolphin, has a singular scimitar-shaped high dorsal fin; long, bony, and broad at the base. He is about 30 feet in length, ferocious, has 90 cylindrical teeth, $1\frac{1}{4}$ inches above the gum, and a fierce persecutor of the whale and seal. In Sir R. Bonnycastle's volumes there is a detailed and very interesting account of the cetacea, of which tribe the author seems to have acquired much information in the Arctic and Northern Atlantic seas.

Fish.—The banks of Newfoundland swarm with almost every variety of the finny tribe, of which the smaller sorts serve as food for the omniverous cod. "The incredible shoals of lance, a small, elongated, silvery, eel-like creature, the interminable armies of migratory herrings, the hosts of capelin which are met with in their several seasons, cause the seas to boil and glitter in their rapid paths, producing the effects of currents upon the bosom of the tranquil deep." The locusts that darken the air, in the countries subject to their devastation, are not to be compared in numbers to the periodical journeyers of the Newfoundland seas. The *capelin*, (*salmo arcticus*), which is the great object of attraction to the cod, whale, &c., is about seven inches long, with a slight, elegantly-shaped body, greenish back, and silver belly, and some of their scales tinged with red. The male fish has a rough fascia, beset with minute pyramidal scales, standing upright, like a pile of plush above the lateral fins. Sir R. Bonnycastle says, that when the female seeks the shore for the purpose of depositing spawn, she is taken between two of these ridged males, and they all three rush violently onwards, the compression excluding the ova: two, three, and even as many as ten have been observed thus glued together by these villous crests. The eggs are deposited among the smaller fuci and conservae, on which they feed. The dorsal fin is in the middle of the back; tail forked; scales minute. In taste, it resembles the smelt. This beautiful little fish, in June, and early in July, crowds into the shores of Newfoundland in countless myriads to spawn. Wherever there is a strip of beach at the head of a bay, every rolling wave strews the sand with hundreds of capelin, leaping and glancing in the sun till the next wave sweeps them off and deposits a fresh multitude: the white foam, and the glit-



WILLIAM PITT, EARL OF CHATHAM.

OR 1778

FROM THE ORIGINAL OF THE ART. IN THE COLLECTION OF

THE RIGHT HON^{BLE} LORD BRIDPORT

tering colours of the fish, form a beautiful sight.

Mr. Anspach, who resided in Conception Bay, thus describes the arrival of a capelin schule, or shoal:—

"It is impossible to conceive, much more to describe, the splendid appearance, on a beautiful moonlight night, at this time. Then its vast surface is completely covered with myriads of fishes, of various kinds and sizes, all actively engaged, either in pursuing or avoiding each other; the whales, alternately rising and plunging, throwing into the air spouts of water; the cod-fish, bounding above the waves, and reflecting the light of the moon from their silvery surface; the capelins, hurrying away in immense shoals, to seek a refuge on the shore, where each retreating wave leaves multitudes skipping upon the sand, an easy prey to the women and children, who stand there with barrows and buckets, ready to seize upon the precious and plentiful booty; whilst the fishermen, in their skiffs, with nets made for that purpose, are industriously employed in securing a sufficient quantity of this valuable bait for their fishery."

There are several varieties of the cod-fish on the Newfoundland shores; the principal fish caught is like the *gadus morrhua* of Linnaeus, or ash-coloured cod; the *gadus carbonarius* or coal cod (seych fish of Norway) is largely dispersed, and the best eating of the two; it sometimes weighs 20 or 30 pounds. The fish caught on the bank are supposed to be better than the shore fish. The bait used for the cod, when taken with hook and line, is the capelin; when the capelin leaves in August, the young squids or cuttle-fish are caught up for bait, and when their season is over, the autumnal, or "fall," herrings are used; shell-fish, both fresh and salted, is used for the hook. Sometimes food is so abundant, the fish will not bite; they are then taken with a jigger or plummet of lead, armed with hooks, and drawn quickly up and down in the water, by which the cod is attracted and struck with the hook as he swims round the jigger; this mode is deemed objectionable, as more fish are wounded than caught. In some places the cod is taken in nets or sieves. The cod fishing closes in September; the quantity one man may catch during the season is very great, as the fishers say they have the chance every day of catching five pounds worth of fish. A quintal of dry fish is made from about 300 weight of "green" or fresh fish, and the quintal is worth about 15s., consequently it would require a man to catch nearly a ton weight to produce a quantity of the value of £5: in other words he must catch 224 cod of an average weight of 10 pounds each, in one day. The wages are generally £20 for the summer, or five

or six active individuals club together and catch cod to the value of £100. Some families do not cure the fish themselves, but take it as it is caught to the stores of merchants, whose men cure it for the proprietors of the stores. The cod constitutes the wealth of Newfoundland; notwithstanding the myriads which have been taken by Europeans during the last two centuries, it seems as abundant as when the banks were first visited. So prolific is the fish, that the spawn of a single cod if unmolested, would, it is supposed, in a few years fill the ocean. Salmon fishing is followed during the summer by several families; the dog fish is caught for the sake of the oil contained in his liver; the herring fishery is increasing, and the capelin is used for the food of man, as well as for bait for the cod. Of 22 known kinds of mackerel only one frequents the arctic regions. The yellow mackerel, which abounds in the Gulf of St. Lawrence, is supposed to cross the Atlantic from the African coast. The gigantic mackerel or tunny fish is occasionally taken. Herrings appear in vast numbers. The mullet (*mullen barbatus* and *ruber*), frequent the coasts. The lance is a long thin fish like a sand eel; the sea on the banks sometimes seems alive with this little creature, which serves many other fish for food. The lakes and rivers in the interior contain excellent fish, so that the inhabitants possess at least abundance of this description of food, on which all the animals in the island, from the cow down to the domestic poultry, feed.

AGRICULTURE.—The governor, Sir G. Le Marchant, has devoted great attention to this subject; and his report to Earl Grey, in 1848, is very valuable. It shows that Newfoundland has not the inhospitable climate and barren soil which has long been supposed peculiar to the place:—

"It may be said that the cultivation of the soil made little or no progress in Newfoundland until after the peace with France in 1814. The sole occupation of the resident inhabitants was confined to the fishery; an opinion generally prevailed, that the soil and climate raised impassable barriers to agriculture. It was further considered, that the encouragement of settlement and agriculture, even if it were practicable, would be injurious to the interests of the fishery; in consequence, every obstruction and impediment was thrown in its way. It was an offence against the laws of the fishery to clear, to inhabit, or to cultivate the waste lands of Newfoundland. Before that period there may have been some few gardens for vegetables, and a few spots of land cleared for raising potatoes. Farming, as an occupation, or as a means of employment or subsistence, was unknown. The first relaxation was made in the olden

system regarding the land in 1815, by governor Sir Richard Keats; he was authorized to make small grants of land, limited from two to four acres. Many lots of ground, now so valuable in the vicinity of St. John's, were granted during his government. From 1818 to 1824, governor Sir Charles Hamilton, the first resident governor, made some larger grants of land, and on more favourable terms.

"Sir Thomas Cochrane commenced his government in 1825. Immediately on his arrival he entered warmly into the subject of the agricultural improvements of the colony; made liberal grants of land from 500 to 250 acres. During his government, the first main road that was opened in the island, the road from St. John's to Portugal Cove, was projected and completed. Much land was cleared, and very considerable progress made in agricultural improvement.

"His excellency Captain Prescott followed in his footsteps, he gave every facility and every encouragement in his power to the general clearance and cultivation of the land. Through his recommendation to Her Majesty's government, much of the obstructions that remained to the obtaining of land was removed, and it may be said, that during his government, hundreds of poor industrious persons were located on land which now affords a comfortable support to themselves and families. The large amount of appropriations, during his government, for the formation of roads, greatly facilitated the progress of agriculture; not only the margins of the various roads branching from St. John's, but likewise in Conception Bay, Trinity Bay, Bonavista, Ferryland, Prepassey, St. Mary's, Placentia, Burin, and in all the inhabited districts of the island, no matter where, a road was opened; cultivation and population was certain to follow in its course.

During the administration of his successor, Sir John Harvey, large votes were recommended to the Assembly for roads and bridges. These public improvements rapidly progressed, as a matter of course cultivation and settlement followed. The land, particularly in the neighbourhood of St. John's, doubled in value. Agriculture became a recognised and most important branch of industry, a source of employment and subsistence to a large portion of the people.

"At present it will be scarcely considered necessary to adduce arguments or proofs as to the capability of the soil of Newfoundland for agricultural purposes, as a general principle it may be safely laid down that in no case where due skill and industry have been employed, have they failed to repay the husbandman's toil. Farms have been successfully cultivated in the districts of St. John's, Trinity, Bonavista, Conception Bay, St. Mary's, Placentia, Burin, Fortune Bay. And in every part of the island, wheat, oats, barley, potatoes, turnips, have been produced of the best quality.

"It may be said without fear of contradiction that in no instance, when industry and skill have been used in clearing and cultivating the soil of Newfoundland, has it failed to make an ample recompense. The most successful cultivator is the man who works himself. The cultivators of small portions of ground were truly the pioneers, who were first in making inroads on the wilderness. The judicious expenditure of capital will also meet a profitable and certain return.

"When it is taken into consideration the difficulties and prejudices that the cultivator of the soil had to contend with, the surprise should be, not the

slow progress that agriculture has made, but that so much has been accomplished. Necessity, more than choice, drove the inhabitants to the cultivation of the soil. As long as the fisheries made such profitable returns, and enabled the fisherman to support himself and family for the whole year from the fruits of a few months' employment in the fishery, he never would voluntarily turn to the laborious task of clearing the wilderness. The unequal competition of the French and the Americans reduced the profits in the fishery; it scarcely paid its own expenses. The only alternative left to the inhabitants was either to emigrate or to cultivate the soil. Whatever proportion of the fisheries that remain to the British has been preserved by the auxiliary support which the inhabitants were enabled to obtain from the cultivation of the soil.

"The cost of grubbing up and cultivating the waste land of this country must necessarily vary much according to the quality and condition of the land itself and its locality. That in the vicinity of the town of St. John's has more of rocks and stones on the surface than in some other parts of the district, and the cost of grubbing, clearing rocks and stones, burning stumps and roots, ploughing, harrowing, and manuring for a crop cannot be safely calculated at less than £13 sterling per acre, out of which may be deducted the net value of a fair crop of oats, potatoes, or turnips, which the land will yield the first year from the manure and burnt ashes. In some other parts of the district land may be doubtless grubbed up and cultivated at much less expense, being comparatively free from stones, and requiring little labour previously to the plough being used. It may be observed that the land in this portion of the island is, generally speaking, of a light, gravelly nature, easy to work and cultivate, soon warming with the heat of the summer, and quick in forcing forward the crops when planted. On the other hand, it appears to require a liberal supply of manure to put it in condition, and from its porous nature, repeated applications of manure are desirable until the land is laid down to grass, which yields crops of hay, of great abundance, as also of excellent quality. When again ploughed, it is generally much improved in texture and quality, and will carry grain crops well, especially if a small supply of lime be harrowed into the surface, for this latter article is at present too dear to admit of the free use of it as in England. At no distant period it may be hoped we shall have plenty of lime brought from other parts of the country, where it exists in great abundance.

"The grain crops of last year, though in some instances sown late, all answered remarkably well. The governor was assured on authority that could be relied on, that on one of the farms in the vicinity of this town, two bushels and two gallons of beer barley were, on the 19th May, sown upon three-quarters of an acre of potato land, and from it were threshed 42 bushels of excellent quality, being at the rate of 56 bushels per acre. Of which 30 bushels were sold at 6s. currency per bushel for malting and brewing, and the crop paid the party better than any crop grown on an equal space of land for many years. Wheat has also been known on another farm in this neighbourhood to produce at the rate of 50 bushels per acre, and this is a heavy crop for any country. This large produce may be in a great degree attributed to the repeated applications of fish and other manures to the previous crops of potatoes.

"In the past year, 1796 acres of land have been sold, the price at auction averaging about 10s. per

acre. The number of separate grants, into which these lands were divided, amounted to 176. Large supplies of seed (wheat, barley, and oats,) have been imported by the government, as well as vegetable and various sorts of garden seeds; these will be distributed in the course of this spring amongst the cultivators of land in the colony; and a committee of gentlemen is appointed, to whom such distribution has been entrusted. In the hope of adding a stimulus and an encouragement to the further cultivation of the soil, as also of inducing the working farmers to avail themselves of these opportunities, prizes have been offered for the clearance and planting of new virgin land; as also for the best crops of wheat, barley, and oats.

"Two mills, adapted for the grinding of meal as well as grain, have likewise, with the assistance of government, been established; the one in this town, and the other in Conception Bay. By a steady perseverance on the part of the people in the prosecution of measures such as these, abundance and plenty will again be restored to this island, and the more general extension of agriculture will, I am confident, be attended with vast benefits to the present and future generations of Newfoundland.

"*Horticultural*.—It has been frequently remarked by strangers as well as residents, that the culinary vegetables grown here are not inferior to the best of their kinds in Europe, doubtless owing to the rapidity with which vegetation takes place, when the frigid temperature of winter is dispelled by the genial heat of summer weather, a change which, some seasons, occurs very suddenly. All ordinary garden vegetables are grown with as little trouble as in England. Among those most commonly cultivated are lettuce, endive, radish, asparagus, seakale, beets, turnips, cabbages, cauliflowers, peas, beans, both French and broad, all of which attain maturity with common care, although, in very few instances, have they much of that skill and good management bestowed upon them which, in gardens in England, appears almost a matter of course.

"Melons and cucumbers are grown every year in slight hotbeds, and the latter may be transplanted from the seed-bed to the open air, where they will generally produce abundantly. Turnips, cabbages, and all of the Brassica tribe, have, in the early stages, numerous enemies in the turnip-fly, caterpillars, &c.; but, independently of this, the climate and soil are fitted to produce large crops of them. It may be observed, that many of the perennial and other herbaceous plants of Britain bear the severity of the Newfoundland winter well, among which may be mentioned the polyanthus, pansy, and sweet William, also pinks and carnations generally; and among bulbous roots, all kinds of lily, even the white lily, tulip, hyacinths, &c., are rarely known to fail, though kept in the ground all winter.

"Of fruit trees, those of the more hardy kinds, and which produce their fruit at an early season, of course answer best. The climate is well adapted to gooseberries and currants of every variety, and they produce abundant crops almost invariably. The insect tribe alone seems inimical to them, and the trees are frequently divested of their foliage by caterpillars, except in low or moist situations, where these trees generally succeed best. Cherries of most kinds also bear the climate, and produce well; but the Kentish and Mayduke may be relied on as standing the climate, and bearing fruit as well as in England.

"With respect to apples, pears, and plums, the

early varieties only may be considered as well adapted. Plums of many kinds, and damsons have been grown for many years in Conception Bay, as well as in St. John's. The earliest kinds ripen, and the late sorts answer for culinary purposes. Raspberries and strawberries succeed as well here as in any country; they are, in fact, indigenous, and are found wild in considerable quantities. The cultivated kinds rarely, if ever, fail to yield fruit, and the strawberries are remarkable for abundant produce and fine flavour."

The honourable P. Morris, treasurer of Newfoundland, who has paid much attention to the affairs of the island, says, in reference to tillage—

"If agriculture has rapidly advanced in the worst and most sterile part of the island, and has been found most remunerative to those engaged in it, there can be no doubt of its succeeding in parts where the soil and climate are more favourable. The question does not rest on speculation or problematical opinions. Some of the finest and most productive farms are in successful occupation and cultivation in the various remote districts of the island.

"The best practical proof of the capabilities of the soil of Newfoundland for agricultural purposes is to be found in the census returns of 1836 and 1845.

"There is no means of accurately ascertaining the extent of land cultivated and annual produce before the year 1836, in which year, under a local Act, the following returns were made:—

RETURNS FOR 1836.

24,117 acres of land in possession.	
11,062½ ditto in cultivation, at £20 per acre	£221,250
1,559 horses, at £10	15,590
5,832 neat cattle, at £5	29,160
6,923 sheep, at 20s.	2,943
3,155 hogs, at 30s.	4,379
Goats not taken in the return of the year, say 4,000 at 20s.	4,000
	£277,322

Annual Produce.

1,168,127 bushels of potatoes, equal to 467,250 4-5 barrels, at 6s.	£116,812
10,310 bushels of grain, at 3s.	1,546
6,975 tons of hay, at £5	34,875
Increase of stock, calves, sheep, &c., &c.	8,000
Milk, butter, &c., &c.	20,000
Vegetables, garden stuffs, &c.	10,000
	£191,233

RETURNS FOR 1845.

83,435½ acres of land in possession.	
29,656½ acres of land in cultivation, at £20	£598,125
2,409 horses, at £10	24,090
8,135 neat cattle, at £5	40,675
5,750 sheep, at 20s.	5,750
5,077 hogs, at 30s.	7,615
5,791 goats, at 20s.	5,791
	£682,046

Annual Produce.

341,341 barrels of potatoes, at 5s.	85,535
11,695 bushels of grain, at 3s.	1,754
11,013 tons of hay and fodder, at £5	55,065
Increase of stock, calves, sheep, &c.	15,000
Milk, butter, poultry, eggs, &c.	30,000
Garden stuffs, vegetables, &c.	15,000
	£202,354

Estimated value of Land in cultivation, and Agricultural Stock, showing the increase in nine years.—Estimated value of land in cultivation, and agricultural stock, in 1836, £277,675 10s.; estimated value of land in cultivation, and agricultural stock, in 1845, £677,046 10s. Increase in value of land in cultivation, and agricultural stock, in nine years, from 1836 to 1845, £399,371. Annual produce for the year 1836, £191,234 4s.; annual produce for the year 1845, £202,354 10s. Increase in annual value of produce, £11,120 6s.

"There must be some material error in the returns, either for the year 1836 or 1845, in respect to the produce. In the former year, with only 11,062½ acres of land in cultivation, the quantity of potatoes is given at 467,250,485 barrels. In 1845, with 29636½ acres in cultivation, there is given only 341,341 barrels, showing a deficiency of potatoes in the latter year to the extent of 125,909 barrels, which, valuing at 6s. per barrel, amounts to £31,975 6s. This, added to the estimated value of the annual produce for 1845, supposing the potato crop of that year to have equalled the produce for 1836, and there is no doubt whatever of it having far exceeded it, the annual value of agricultural productions for 1845 would amount to the sum of £233,329 16s.

"The produce may appear excessive in reference to the limited amount of land in cultivation; but it must be taken into account that a great portion of it is cultivated as garden ground, highly manured with fish offal. The produce is abundant, particularly of potatoes, the great object with all the small occupiers, who compose a vast majority of the whole. The estimate of the value of land, at £20 per acre, and of stock, without taking into account the land in occupation but not cleared, nearly £700,000, would startle those who have not turned their attention to

the subject. It is a curious fact, but not more curious than true, that the depression of the fisheries, and the consequent distress of the people of Newfoundland, have forced into existence, a capital, a permanent capital, almost equal in amount to the whole value of ships, boats, and fishery stock, in the palmy days of monopoly, at any period for centuries past. What has yet been done only forms a nucleus for further advancement; and, in all probability, before another quarter of a century passes over the heads of the present generation, the agricultural capital of Newfoundland, with other products of industry, will exceed many times the amount of any capital invested in the fisheries; and what is better, unlike that capital, it cannot, when increased in bulk, be removed by migratory birds of passage, to increase the stock and improve the condition of every other country but that in which it was produced."

The total number of acres of land granted is about 23,400; and sold, 11,528. The quantity ungranted cannot be correctly ascertained. The number of grants under 100 acres, in 1848, in the central district, was 50; acres, 947. Northern, 10; acres, 242. Southern, 15; acres, 152. The census of 1836 states the number of horses then in the island, 1,551; neat cattle, 6,136; sheep, 2,995; hogs, 3,261. The returns of produce are imperfectly given for the several districts.

The census of 1845 does not supply any information relative to the quantity of land under different crops; but it furnishes the following detail:—

District.	Acres under crop.	Acres un-mentioned	Horses.	Horned Cattle.	Sheep.	Goats.	Oats.	Potatoes.	Hay.	Straw and Fodder.
							Bushels.	Bushels.	Tons.	Tons.
St. John's	19,099	41,078	771	1,307	228	1,125	3,346	48,543	3,469	844
Conception Bay	3,798	4,579	919	1,576	2,243	2,944	6,788	152,878	2,108	221
Trinity Bay	1,079	399	121	997	179	187	8	29,628	516	3
Bonavista Bay	612	196	52	505	243	680	272	25,971	356	1½
Twillingate and Fogo . .	406	181	5	276	38	338	14	13,682	51	2
Ferryland	1,202	1,073	176	607	315	276	556	28,556	878	37
Placentia and St. Mary's	2,200	2,072	245	1,618	1,938	226	588	28,759	1,557	16
Burin	1,347	484	85	889	127	8	20	11,081	777	—
Fortune Bay	212	115	5	360	439	7	3	2,067	174	2½
Totals	29,654	52,605	2,409	8,135	5,750	5,791	11,695	341,165	9,886	1,127

There is no established market for agricultural produce, and comparatively little is sold, the greater part being consumed by the growers. The average value of the crops is—oats, 2s. to 2s. 6d.; potatoes, 1s. 3d. to 1s. 9d.; turnips, 1s. to 1s. 3d. per bushel; hay, £4 to £5 per ton; outer fodder, 50s. to £3 per ton.

In 1776 a copper mine was discovered and worked for a short time near Shoal Bay, about 15 miles from St. John's. Some quarries of limestone have also been found; in one at Canada harbour, on what is called

the French coast, the stone is said to be of excellent quality.

Manufactures.—The number of vessels built at St. John's, in 1848, was 19; tonnage, 794. There are in the capital two corn mills, one saw and one bone mill, a gas manufactory, an iron foundry, and a brewery.

Prices of produce and merchandise in 1848.—Wheaten flour, per bushel, 35s. to 40s.; wheaten bread, per lb., 2d.; horned cattle, £8 to £12; horses, £15; sheep, 15s. in July, 35s. in January; goats, 20s. to 25s.; swine, 6d. per lb.; milk, per quart, 8½d. to

5d.; butter, fresh, 1s. 6d. to 2s.; ditto salt, 9d.; cheese, 5d.; beef, 5d. to 7d.; mutton, 6d. to 8d.; pork, 5d. to 7d. per lb.; rice, 25s. to 28s. per cwt.; coffee, 7d.; tea, 2s. per lb.; sugar, 35s. per cwt.; salt, 7s. 6d. to 10s. for 8 bushels; wine, per gallon, 7s. 6d.; brandy, 12s. 6d. to 14s. 6d.; beer, per hoghead, 60s.; tobacco, 7d. to 8d. per lb.

Wages for labour.—Domestic, £20 to £30 per annum; predial, £18 to £25; trades, 5s. to 6s. 6d. per diem.

Fisheries.—The official report of the governor, in 1848, on the subject, contains some interesting facts; and first with regard to the seal fishery:—

"The capture of the seal for the sake of its skin, and the oil that is produced from its fat, has been an object to the inhabitants from its earliest settlement, either by means of nets along its shores, or by vessels proceeding to the fields of ice that annually drift from the arctic regions. No date can be assigned when nets were first introduced; but the fishery by this means was carried on to some considerable extent on that part of the eastern coast which was ceded to the French at the close of the last war; but now very few establishments exist in Newfoundland; but there are still some of considerable extent on the coasts of Labrador, and in the straits of Belle Isle.

"The prosecution of the seal fishery by vessels is quite of a modern date, it being only 54 years ago that the first vessel sailed on this expedition, and it has in this short period arrived at its present extent, and now gives employment to near 11,000 men, actually engaged in catching the seal, and employs 340 vessels, of the aggregate burthen of 29,800 tons, new measurement. In 1793 a merchant of St. John's commenced it by fitting out two small vessels, of about 45 tons each, which sailed the first week in April, and were very successful, one returning with over 800 seals, and the other with not quite so many.

"In the year 1796 four vessels sailed from St. John's, and a few from Conception Bay; originally the vessels engaged in this fishery were of a small description, even open boats that were employed in the cod fishery of 30 tons, and even less, were sent out on this hazardous voyage, and a few rarely exceeded 50 tons, with a crew of 11 men, but they gradually increased in size, and the number of hands sent in them. In fact there was for a long period a prejudice of employing vessels over 60 tons, as they were considered too large and too heavy to prosecute the fishery successfully; this prejudice existed even so late as the year 1823, when two vessels of 120 tons each were built in Conception Bay expressly for the seal fishery. Both of these vessels were very fortunate the first time of going out; one bringing home in the spring of the year 1826, 6,666 seals, and the other 5,828 seals.

"This seems to have set the question as regarded size at rest, and from that period the old class vessels, of small tonnage, have been gradually superseded by those of a larger class. The vessels now engaged in the seal fishery are many of them over 115 tons, new measurement; or 140, old measurement; very few, indeed, now going out so small as 80 tons, new measurement.

"This fishery is now of very great importance to

the inhabitants of this colony; for besides employing 11,000 men in actually catching the seals, it gives employment to almost every class of mechanics, as well as common labourers, in manufacturing the seals, the value of which, in the spring of the past year, exceeded £214,000. Its great value may be well imagined, when the shortness of the period of this fishery is considered; these large sums being realized within the space of six weeks.

"The usual time of leaving for the ice is from the 1st to the 10th of March, if the vessels can get out, though formerly no vessel thought of leaving before the 25th of March to the 10th of April. The crews are shipped on shares, each man being directly interested in the quantity of seals caught: they pay the owner a sum varying from 10s. to 35s. for being allowed to proceed in the vessel, which is called berth-money; each man has to find a gun, or to pay the hire of one, and also has to find 25 sticks of firewood for fuel while on the voyage. The owner of the vessel receives one-half the seals brought home in the vessel for fitting her out, &c., with all necessary material; the other half is taken by the crew, and equally divided among them according to the number, the owner receiving the master's share, who is paid by the owner 4d. to 6d. for each seal the vessel brings in, or 1s. to 1s. 3d. per cwt., according to the agreement that may be made between them previous to the commencement of the voyage.

"The vessels in Conception Bay are insured in mutual societies, that is, a certain number of owners enter into an agreement with each other that they will pay all losses that may occur to each other's vessels during the season. There are two of this description now in Conception Bay, one at Harbour Grace, the other at Brigus. Each one has a secretary, who keeps the records of the society, for which he is paid 15s. for each vessel insured. There are also three surveyors to inspect the vessels previous to proceeding on the voyage, and to see they are properly equipped to encounter its dangers; they are paid a small sum for their services. The insurance in the Brigus society has been very light indeed, only five vessels having been lost since the year 1833, whereas the Harbour Grace society has been very unfortunate lately, the losses being very heavy. The vessels of St. John's are insured in a society, and a certain premium is charged each vessel, according to her class."

The fishing or catching of the seals is an extremely hazardous employment; the vessels are from 60 to 150 tons, with crews of from 16 to 30 men each, provided with fire-arms, &c., to kill the seal, and poles to defend their vessels from the pressure of the ice. In the beginning of March, the crews of the vessels in their respective harbours collect on the ice with hatchets, saws, &c., and cut two lines in the frozen surface, wide enough apart to allow their schooners to pass—an operation of great labour, as after the thick flakes have been sawn or cut through, they have to be pushed beneath the firm ice with long poles. The vessels then get out to sea, if possible, through the openings, and work their perilous way to windward of the vast fields of ice, until they arrive at one covered with the animals of which they are

in quest, and which is termed a seal meadow. The seals are attacked by the fishers, or, more properly speaking, hunters, with fire arms, or generally with short heavy batons, a blow of which on the nose is instantly fatal. The hooded seals sometimes draw their hoods, which are shot-proof, over their heads. The large ones frequently turn on the men, especially when they have young ones beside them, and the piteous cries and moans of the latter are truly distressing to those who are not accustomed to the immense slaughter which is attended with so great a profit. The skins, with the fat surrounding the bodies, are stripped off together, and the carcasses left on the ice. The winter tenants on the Labrador coast say the young seal is excellent eating. The pelts or scalps are carried to the vessels, whose situation during a tempest is attended with fearful danger; many have been known to be crushed to pieces by the ice closing on them. Storms during the dark night, among vast icebergs, can only be imagined by a person who has been on a lee shore in a gale of wind; but the hardy seal hunters seem to court such hazardous adventures.

In 1834 the number of vessels employed in the seal fishery was 353, of which 120 were from St. John's. The number of seals caught was: in 1831, 744,000; in 1832, 523,000; in 1833, 438,000; in 1834, 401,000.

Number of Vessels sailing for the Seal Fishery, Spring, 1847.

Districts.	Vessels.	Tonnage.	Men.
St. John's	95	9,353	3,215
Brigus	66	5,010	2,111
Carbonear	54	4,634	1,672
Harbor Grace	51	5,084	1,684
Ports to the Northward .	74	5,803	2,123
Total	340	29,884	10,805

Number of Seals caught, Spring, 1847.

Fishing Stations.	Seals caught.
Manufactured in St. John's	334,270
Manufactured in Conception and Trinity Bay	110,910
Total number caught	455,180
Estimated value of seals caught, Spring, 1847	£214,175

"Cod Fishery.—The extraordinary abundance of cod fish on the banks and shores of Newfoundland was speedily ascertained after the discovery of the island in the year 1479. The fishery in 1626 was rapidly growing into importance, and at that time

the island began to supply the demand in Spain and Italy. At the close of the late war the fisheries rose to a pitch of prosperity quite unprecedented. The exports in the year 1814 amounting to £2,831,538. When, however, peace was restored, the British government conceded to France her extensive rights of fishing exactly as they stood at the commencement of the war; and now, owing to the large bounties with which that government supports and encourages their fisheries, we are obliged to compete with them on very unequal terms in the supplying of foreign markets, so much so that the British Bank Fishery has ceased to exist, and the fisheries have dwindled down to an open boat in-shore fishery, and even that is year after year getting worse, and has ceased to give the remunerative employment to those engaged in it, as was the case in bygone years.

"The cod fishery opens at the beginning of June, and lasts till about the middle of October, and may be said to form the staple occupation of the inhabitants of this colony; it is prosecuted by the planters and their assistant fishermen, who form one of the two classes of this community; they live under the control and influence of the other class, the merchant, on whom they are solely dependent for the supplies and requisite means for pursuing their calling.

"By the census of 1846 the planters, fishermen, and shoremen amounted in number to 18,503 persons, and their boats, which are divided into three classes according to the burthen of fish they can carry, amounted to 10,089; the divisions being—8,092 boats, carrying from 4 to 15 quintals of fish; 1,025 boats, from 15 to 30 quintals; and 972 boats, from 30 quintals upwards.

"The quantity of dried cod fish exported in the year 1847 was 837,973 quintals, the value of which may be estimated at £489,940. The liver of the cod yields a large quantity of oil, which is extracted from it by natural heat, no other preparation being necessary than merely putting it into casks, and when it is fully decayed drawing off the oil. A quintal of good fish will yield more than a gallon of oil, but the produce of the season is not more than 80 gallons to 100 quintals of fish. The quantity of cod oil exported in the past year was 2,369 tons, the value of which may be estimated at £60,329.

There are, as above stated, an immense number of boats of different descriptions engaged in the shore fishery; viz. punts, skiffs, jacks, or jackasses, western boats, and shallops, employing from one to seven men each, according to their size, and the distance they may have to sail before they reach their respective fishing grounds. The punts and small boats are generally manned by two persons, and occupied in fishing within a very short distance of the harbour, or circles to which they belong; the skiffs, carrying three or four hands, proceed to more distant stations, sometimes twenty or thirty miles; the western boats are larger than skiffs, and usually fish off Cape St. Mary's, off the entrance of a bay so named; the shallops are still larger craft, but now almost obsolete: some of this latter class have been known to admeasure 50 or 60

tons each. The punts and skiffs, constituting what is termed a "Mosquito fleet," start at the earliest dawn of day, and proceed to the fishing grounds, when the cod are expected in great abundance, for at certain seasons they congregate and swim in shoals, and are not unfrequently as capricious in their resort as the winds which are said to influence their movements: these boats generally land their cargoes at the "stage" at least once a day, usually in the evening, except it be in the height of the season, during capelin time, when they may occasionally load twice a day; the western boats and shallows split and salt their fish abroad, and return to their respective harbours when they may have expended all their salt, or loaded their craft.

The *stage* is erected on posts, and juts out into the sea, far enough to allow the boats to come close to its extremity, for the ready discharge of their cargoes; it is generally covered over, as the rain will injure the fish, and on the same platform is the salt house, with the benches for the *cut-throat*, *header*, *splitter*, and *salter*, the two latter having in point of wages the precedence, and the two former being on a par.

Having thus explained the method of cod-fishing, it remains only to describe the manner of curing. Each salting-house is provided with one or more tables, around which are placed wooden seats and leathern aprons for the *cut-throats*, *headers*, and *splitters*. The fish having been thrown from the boats, a man is generally employed to pitch them with a pike from the stage upon the table before the *cut-throat*, who rips open the bowels, and having also nearly severed the head from the body, he passes it along the table to his right-hand neighbour, the *header*, whose business is to pull off the head, and tear out the entrails; from these he selects the liver, and in some instances the sound; the head and entrails being precipitated through a trunk into a flat-bottomed boat placed under the stage, and taken to the shore for manure; the liver is thrown into a cask exposed to the sun, where it distils into oil, and the remaining blubber is boiled to procure an oil of inferior quality, and the sounds, if intended for preservation, are salted. After having undergone this operation, the cod is next passed across the table to the *splitter*, who cuts out the back bone, as low as the navel, in the twinkling of an eye.

With such amazing celerity is the ope-

ration of heading, splitting, and salting performed, that it is not an unusual thing to see ten codfish decapitated, their entrails thrown into the sea, and their back bones torn out, in the short space of one minute and a half. The *splitter* receives the highest wages, and holds a rank next to the master of the voyage; but the *salter* is also a person of great consideration, upon whose skill the chief preservation of the cod depends.

For the next process, the cod are carried in hand barrows to the *salter*, by whom they are spread in layers upon the top of each other, with a proper quantity of salt between each layer.

In this state the fish continue for a few days, when they are again taken in barrows to a square flat wooden trough (commonly called the *ram's horn*, supposed to be a corrupt term from the French verb *Rincer*,) full of holes, which is suspended from the stage head in the sea. The washer stands up to his knees in this trough, and rubs the salt and slime off the cod with a soft mop. The fish are then taken to a convenient spot, and piled up to drain; and the heap thus formed is called a "water-horse." On the following day or two the cod are removed to the fish flakes, where they are spread in the sun to dry; and from thenceforward they are kept constantly turned during the day, and piled up in small heaps called *faggots* at night. The upper fish are always laid with their bellies downwards, so that the skins of their backs answer the purpose of thatch to keep the lower fish dry.

By degrees the size of these *faggots* is increased, until at length, instead of small parcels, they assume the form of large circular stacks or piles; and in this state the cod are left for a few days, as the fishermen say, to "sweat." The process of *curing* is now nearly complete, and the fish exposed one or twice to the sun are afterwards stored up in warehouses, lying ready for exportation.

There are three qualities of cured codfish in Newfoundland. They are distinguished by the titles of *merchantable fish*, *Madeira*, and *West India fish*. *Merchantable fish* are those cured in the best possible manner, and having no apparent defect: *Madeira* are those having some slight blemish on the face, occasioned by an undue quantity of salt, or being sun-burnt; *West India* having, in addition to the defect of the *Madeira*, some cracks in the middle, or broken at the fins.

Merchantable fish are generally shipped for the Spanish, Portuguese, Italian, and South American markets. Madeira and West India fish are supplied to the West Indies, and of late years a considerable quantity has been annually exported to the southern and western counties of Ireland. The west of England also consumes no unimportant quantity of salted cod annually. Madeira is 1s. a quintal under Merchantable, and 1s. 6d. more than West India.

It will be evident, when the foregoing statements are examined, that the cod fisheries of Newfoundland are to England more precious than the mines of Peru and Mexico; and, in truth, if we consider the vast quantities of fish annually drawn from the banks and adjacent coast, it will be found that as the mere representative value of gold, their worth far exceeds that of the precious metals, to say nothing of the importance of the subject in a maritime, commercial, and political point of view.

"Herring Fishery."—Though the shores of Newfoundland swarm with herrings from March to December, yet the curing of these valuable fish has been in a certain degree totally neglected, though there is no country in the world better adapted for prosecuting this fishery with success. It is the opinion of many persons well versed in the trade, that if proper attention was paid to it, and more care used in curing them than there is at present, in a few years the fishery would rise to such an importance, as not merely to be an auxiliary to the cod fishery as it is at present, but that it would almost rival it. In the past year the number of barrels exported was 9,907, and their value may be estimated at £5,111.

"Salmon Fishery."—The salmon fishery has been carried on in this country from its earliest discovery, and nearly to the same extent as it is at present. The export of them has ranged from 2,500 to 5,000 tierces of 300 lbs. each for the past 50 years, though that is not near half the quantity caught, as a great deal of salmon is shipped to the Labrador and parts of Newfoundland, the accounts of which do not pass through the Custom House, being sold generally to American traders, who buy them loose from 18s. to 25s. per 100 lbs. The number of barrels exported in the past year was 4,917, the value of which may be taken at £9,782.

The fisheries employed and produced as follows:—

Years.	Employed.			Produce.		
	No. of Boats.	Tons.	Men.	Quintals of Fish.	Tuns of Train Oil.	Tuns of Seal Oil.
In 1820	107	5,796	275	810,071	4,487	2,219
" 1821	756	43,512	10,799	No Returns.		

The quintal of fish was then estimated at 8s. to 12s.; train oil at £18 to £20 per tun; seal ditto, £21 to £25.

The following tables, exhibiting a com-

parative statement of the quantity and value of the staple articles of produce exported in three years, will best show the items in which this deficiency occurs:—

Quantity.

Years.	Dried Fish.	Oils.	Seal Skins.	Salmon.	Herrings.
	Quintals.	Tuns.	Number.	Tierces.	Barrels.
1845	1,000,233	8,670	352,202	3,545	20,903
1846	879,015	7,507	265,169	5,201	12,119
1847	837,973	8,624	436,831	4,917	9,907

Value.

	£	£	£	£	£
1845	596,990	243,646	40,123	12,794	11,234
1846	501,008	182,974	29,500	10,598	6,876
1847	489,940	229,185	46,280	9,782	5,111

The following abstract of a report on the French fisheries in Newfoundland, prepared by direction of the collector of her majesty's customs in Newfoundland, is worthy of consideration:—

"The five years' average of fish taken, say 1831 to 1835 inclusive, at the *French shore*, on the banks and in the neighbourhood of St. Pierre and Miquelon, did not exceed 300,000 quintals, which, in 1835, was thus disposed of:—27,000 was sent to Spain, Portugal, and Italy; 40,000 nearly was sent to the French colonies in the West Indies; 170,000 consumed in France; and 63,000 sent to France in a green state and re-exported: total, 300,000 quintals.

"The amount of premiums, drawbacks, and bounties, granted in support of the French fisheries in 1835, was £883,000 sterling, or nearly 20,000,000 francs. Premiums from 100 to 500, and, in many instances, so high as 1,000 francs a man, were granted. The number of fishermen employed was 6,200.

"The bounty on fish re-exported from France to the French colonies in the West Indies, was 40 francs, 33s. 4d. a quintal. It was shortly after that period reduced, and now remains at 24 francs. On fish sent direct to foreign ports in the Mediterranean a bounty of 12 francs (10s.) is paid; and on re-exportation from France to foreign ports, or in crossing the frontier by land into Spain, 10 francs, 8s. 4d. The largest premium granted a French fisherman does not at present, in any instance, exceed 150 francs.

"In the year 1845 the number of French vessels which arrived at St. Pierre was 197; tons, 28,750; foreign vessels arriving at St. Pierre, 1845,—119; total arriving at St. Pierre, 316; value of cargoes, £49,538.

"The number of French vessels engaged fishing on the Banks and baited at St. Pierre 1845, 104; 16,750 tons; 2,601 men.

"The quantity of fish taken by French vessels on the Banks *alone*, and baited at St. Pierre in 1845, was 208,900 quintals; caught in the neighbourhood of St. Pierre and Miquelon, 48,000; total, 256,900 quintals.

"The fish taken on the French shore is not included in the above quantity of 256,900 quintals; but it will be seen that the fishery at St. Pierre in 1845, was only 43,100 quintals short of the whole catch, including the French shore, in 1835.

"Of the last-mentioned quantity (48,000 quintals) taken in the neighbourhood of St. Pierre and Miquelon,

nearly one-half was taken on the British fishing-ground.

"The catch, as regards the fishery at St. Pierre, 1845, was thus disposed of:—48,000 were sent direct to the French colonies in the West Indies; 119,000 consumed in France; 68,000 sent to France in a green state, and re-exported; and 31,900 to Spain, Portugal, and Italy: total, 256,900 quintals.

"The quantity of herrings supplied the French, 1845, and used as bait on the banks:—

" Say 25 vessels, averaging each 110 brls. = 2730	
" 25 " " " 100 " 2500	
" 25 " " " 80 " 2040	
" 29 " " " 69 " 2000	

104 vessels.

Total . 9270 brls.

"The quantity of capelin taken to the Banks and used as bait, is, as compared with herrings, in the proportion of a hoghead to a barrel—one hoghead of capelin being equivalent to one barrel of herrings; thus the quantity of capelin consumed by the French on the Banks in 1845, was 9,270 hds., or 20,858 barrels, to which must be added 4,000 barrels used on the shore fishery, making in the whole 24,858 barrels.

"For many seasons past, until 1846, the quantity of capelin annually supplied to the French islands by our fishermen, was not less than 20,000 barrels. Up to the first of July last, capelin was in abundance at St. Pierre and Miquelon; a very unusual circumstance, which is attributed to a prevalence of southerly and easterly winds. It was not therefore in demand at St. Pierre up to that date, and subsequently from our being in the neighbourhood of Lameline, not more than 300 hds. were conveyed to St. Pierre from our shore. The consequence was, four or five of their first-class Bankers were entirely deprived of bait, and I am informed that they were only enabled

to proceed to the Banks late in July on obtaining a supply of squids from our people.

"The sums paid for bait at St. Pierre in 1845, was, for herrings, £6,950, and for capelin, nearly £5,000. The former cost on an average 15s., the latter 5s. per barrel; and not less than £2,800 was paid for firewood; the quantity sold was 3,200 cords, at 17s. 6d. per cord. These amounts, making in the whole £13,750, were mostly paid in cash, and the greater part of them eventually expended at St. Pierre in the purchase of dutiable articles. Along the line of coast extending from Burin to Harbour Britain, a distance of 100 miles and upwards, there is not at present a single mercantile establishment."

Commerce.—The trade of Newfoundland, for the reasons stated by several authorities, namely, French and American competition, has not of late years increased. The following table will serve as a comparison between the past and present trade of the colony:—

Exports in Years.	Quintals	Barrels	Kegs.	Oil. Tuns.	Seal Skins.
Ave. of 1790, 1, 2	656,800	6,276	—	1,891	—
Ave. of 1798, 9, 1800	382,881	2,223	—	2,131	—
1805 . . .	526,380	5,876	—	—	—
1810 . . .	—	—	—	—	—
1815 . . .	1,245,808	5,380	1,892	8,225	141,374
1820 . . .	899,729	4,913	20,026	8,224	221,334
1825 . . .	973,464	3,796	6,680	7,806	221,510
1830 . . .	760,177	1,799	3,606	12,371	559,342

In 1829 the imports were valued at £819,399, and the exports at £690,309. The following is a comparative statement of the staple articles exported from 1838 to 1843:—

Years.	Dried Fish.		Oils.		Seal Skins.		Salmon.		Herrings.	
	Quintals.	Value.	Gallons.	Value.	No.	Value.	Tierces.	Value.	Barrels.	Value.
1838 .	721,515	£184,649	2,173,634	£249,428	375,361	£30,474	4,408	£13,310	15,276	£10,723
1839 .	865,370	508,157	2,224,262	245,269	437,501	46,336	2,922	11,692	20,806	13,840
1840 .	915,795	576,245	3,206,583	305,197	631,385	39,408	3,396	12,939	14,686	9,036
1841 .	1,009,725	605,014	2,673,574	266,832	417,115	29,961	3,642	12,302	9,965	6,361
1842 .	1,007,980	561,950	2,262,031	233,313	344,683	23,200	4,715	13,678	13,839	7,119
1843 .	936,202	532,194	3,111,312	335,975	651,370	40,497	4,058	12,216	9,649	4,670

Imports and Exports in 1848:—

Countries.	Imports.	Exports.	Shipping.	
			In.	Out.
	£	£	Tons.	Tons.
Great Britain . .	276,769	339,647	27,952	17,257
West Indies . . .	2,496	55,641	41,899	67,504
B. N. America . .	127,060	42,251		
Elsewhere	7,512	8,596		
United States . .	229,279	16,268	19,848	4,653
Foreign States . .	126,512	375,148	35,456	38,051
Total	769,628	837,551	125,155	127,365

Total value of Trade for the last four years.

	1845.	1846.	1847.	1848.
Imports	801,330	802,247	843,409	769,628
Exports	939,136	759,103	806,565	837,581

In 1846–47 the colony was afflicted with a series of calamities; short fisheries, failure of the potato crop, the destruction by fire of a great part of the capital, a hurricane which devastated the coasts on the 19th of September, and the reaction on America of commercial distress in Europe. These disasters sufficiently account for the check given to commerce.

The imports from Great Britain, include bread and biscuit, 115,303 cwts., valued at £23,946; candles, value £2,046; coals, £3,595; cordage and cables, £10,964; cotton manufactures, £35,582; flour, £1,766; Geneva, 1,289 gallons; gunpowder, £1,400; hardware and cutlery, £7,940; iron, bar, &c., £7,113; lead, bar and sheet, £1,748; lead shot, £1,368; lead paints, £1,712; leather

manufactures, £32,234; linen manufactures, £5,016; sails, 9,509; lines and twines, £13,148; nails, £3,460; rum, £1,124; salt, £8,997; silk manufactures, £5,850; slops, £1,339; soap, £4,397; stationery, £4,176; building-stone, £1,793. These are some of the items of imports from England.

The exports of dried fish in 1848 were in value £491,124, of which £30,469 came to Great Britain; £51,807 to the West Indies; £26,273 to British North America; other colonies, £5,820; to United States, £7,592; and to foreign states, £369,963. The value of seal oil exported was £160,909; of cod ditto, £87,622; salmon, £6,597; seal-skins, £50,426.

The fish exported in 1848, was, of dried cod, 920,366 quintals, value £491,924; core, 18, £10; salmon, 3,822 barrels, £6,597; herrings, 13,872 barrels, £7,644; capelin, cod sounds, and tongues, 758 packages, £232; oils, 10,704 tuns, £253,472; seal-skins, 521,604, £58,426. Total value of fish, oil, and skins, £818,305. The consumption of fish in the colony is estimated at $1\frac{1}{2}$ to 2 quintals for each mouth of the population, which raises the quantity of the fish caught from 140,000 to 200,000 quintals.

In 1836 the number of fishing boats belonging to the different places in Newfoundland was:—

Districts.	Under 15 Quintals.	15 to 30 Quintals.	Upwards of 30 Quintals.
St. John's	700	43	13
Conception Bay	1157	46	109
Trinity Bay	798	168	11
Bonavista Bay	181	197	51
Fogo and Twillingate . .	737	36	6
Ferryland	370	139	77
Placentia and St. Mary's .	297	128	90
Burin	169	55	138
Fortune Bay	632	21	19
Totals	5141	833	514

Ship building is carried on in Newfoundland. The number and tonnage of those built were:—in 1837, 26 vessels, 1,170 tons; in 1838, 28 vessels, 1,652 tons; in 1839, 16 vessels, 811 tons; in 1840, 31 vessels, 1,659 tons; in 1841, 33 vessels, 1,683 tons; in 1842, 32 vessels, 1,553 tons; in 1843, 24 vessels, 1,192 tons.

Colonial duties levied in Newfoundland in 1844:—On bread, 3*d.* per cwt.; flour, 1*s.* 6*d.* per barrel; oatmeal, 1*s.* 6*d.* per barrel; coals,

1*s.* per ton; salt meat, 1*s.* 6*d.* per cwt.; ale and porter, and household furniture, 10 per cent.; wine in bottles, 2*s.* 6*d.*; all other wines, 1*s.* 6*d.*; brandy and gin, 2*s.* 6*d.*; rum and whiskey, 1*s.* 3*d.* per gallon; apples, 1*s.* 6*d.* per barrel; molasses, 1*½d.* per gallon; refined sugar, 5*s.* per cwt.; tea, 3*d.* per lb.; tobacco, 2*s.* per lb.; timber, 2*s.* 6*d.* per M. ton; timber and scantling, 1*s.* 6*d.* per ton; shingles, 1*s.* per M.; salt implements and materials for fisheries, horses, cattle, sheep, pigs, corn, seeds, vegetables, manures, books, unrefined sugar, coffee, coin, and bullion, *free of duties*; non-enumerated articles, 5 per cent.

I have described somewhat fully the history and present condition of this important colony, whose annals (in themselves fraught with much interest,) are closely connected with the maritime supremacy of Britain, since on its shores have been reared a skilful and hardy race of seamen, employed in a traffic, which, during the last two hundred and fifty years, has furnished fish and oil to the value of about £120,000,000 sterling. It is impossible to review, without deep regret, the mistaken and most injurious policy so long pursued with regard to Newfoundland. Its brave and loyal, but rude, uncivilized, and mis-governed people, deserved, and had their real position been understood, would most certainly have received very different treatment from the home government; but the mis-representations of a monopolizing party, aided by the infrequency and difficulty of communication, except through an interested medium, prevailed, and Newfoundland with its commanding position, fine harbours, and salubrious climate, was tabooed as a barren and inhospitable island, totally unfit for the habitation of man, and capable only of maintaining a few fishing stations. These misapprehensions are now passing away, the truth, unwarpd by prejudice and unvarnished by exaggeration, is gradually becoming understood, and the results of an improved and improving system of legislation, are shewn in the progress of this ancient and truly British colony. The French and American encroachments, on the privileges granted by the treaty, have been already adverted to; any further comment would be, perhaps, ill-judged.

BOOK VI.—HUDSON'S BAY TERRITORIES.

GEOGRAPHICAL POSITION, AREA, HISTORY, CONSTITUTION, AND WORKING OF THE HUDSON'S BAY COMPANY; PHYSICAL ASPECT, FORTS AND STATIONS, POPULATION, &c.

THE north-west territories of British America, exclusive of Canada, extend from the Pacific Ocean and Vancouver's Island along the parallel of the 49th degree of north latitude, near to the head of Lake Superior, and thence in a north-easterly direction to the coast of Labrador and the Atlantic. The Arctic Ocean forms the northern boundary. The whole region between the meridians of 55° and 141° of west longitude is included, excepting a strip of Russian territory on the Pacific Ocean, between 54° and 60° north latitude, of ten leagues in breadth, following the sinuosities of the coast.

It is extremely difficult to form anything like a correct estimate of the dimensions of this vast region, from the number and extent of its inland seas. Its length is stated by Murray at about 2,600 miles, and its breadth at nearly 1,460 English miles. Its area is calculated by Arrowsmith at 3,060,000 square miles.

HISTORY.—In 1517 Sebastian Cabot, while in search of the north-west passage, penetrated into Hudson's Bay, but without discovering it to be an enclosed sea. In 1585 Davis, whilst prosecuting a similar investigation, discovered the strait since called by his name. In 1610 Hudson sailed through the strait, and into the bay named from him *Fretum Hudson*, "the Hudson Sea;" but being compelled to winter there, extreme cold and severe suffering led to a mutiny among his crew, and he, with several of his adherents, was exposed in a small boat, and doubtless perished; a few only of the sailors returned to tell the tale. In 1616 Baffin traced the outlines of another great bay, to which his name was given. Subsequent voyages, made by several English navigators, proved that the vast expanse which had been taken by Hudson and others for the open sea, had no other outlet but the strait through which it had been entered, while its shores

were found to be tenanted by furred animals of great value. The first idea of forming a settlement was suggested by a Frenchman, named Grosseliez, to his own government, but being coldly received he obtained, through the British ambassador, an interview with Prince Rupert, before whom he laid his plan. The prince, entering warmly into the project, by his assistance, a vessel was fitted out, which, in September, 1668, reached a river then called Nemisco, to which the adventurers gave the name of Rupert. They wintered there with less suffering and difficulty than had been anticipated, and on their return made so favourable a report, as to induce Prince Rupert, the Duke of Albemarle, Earl of Craven, Lord Ashley, and others, to form a company and commence a traffic in furs, for which purpose £10,500 was subscribed. A charter of incorporation was granted by Charles II., giving to the company full possession of

"All the lands and territories upon the countries, coasts, and confines of the seas, bays, lakes, rivers, creeks, and sounds, in whatsoever latitude they shall be, that lie within the entrance of the straits, commonly called Hudson's Straits, that are not already actually possessed by, or granted to any of our subjects, or possessed by the subjects of any other Christian Prince or State."

The charter proceeds to grant further,

"The whole and entire trade and traffic to and from all havens, bays, creeks, rivers, lakes, and seas, into which they shall find entrance or passage by water or land out of the territories, limits, or places, aforesaid; and to and with all the natives and people inhabiting, or which shall inhabit within the territories, limits, and places aforesaid; and to and with all other nations inhabiting any the coasts adjacent to the said territories, limits, and places which are not already possessed as aforesaid, or whereof the sole liberty or privilege of trade and traffic is not granted to any other of our subjects."

A settlement was immediately formed by the company on Rupert's river. In 1674 stations were established on Moose river, and a few years after on the Albany, to

which were soon added two more on the Nelson and the Severn. These vigorous measures awakened the French court to a sense of their neglect, and Grosseliez, already detached from the English service, was sent out, in 1682, to found a factory on Hayes River, which he succeeded in doing, and also in surprising the British one on the Nelson. From this time hostilities were of frequent occurrence between the English and French settlers, yet notwithstanding we find from a document laid before parliament in 1842, that the profits of the company must have been very large, since, notwithstanding losses sustained by the capture of the company's establishments by the French in the years 1682 to 1688, amounting to £118,014, they were enabled to make a payment to the proprietors in 1684 of 50 per cent.; another payment in 1688 of 50 per cent.; and a further payment in 1689 of 25 per cent. In 1690 the stock was trebled without any call being made, besides affording a payment to the proprietors of 25 per cent. on the increased or newly-created stock; in the years 1692, 1694, 1696, and 1697, the company incurred loss and damage, to the amount of £97,500, by other captures of their establishments by the French.

These establishments were restored to the company by the peace of Utrecht in 1713, who in 1720 were enabled again to treble their capital stock with only a call of 10 per cent. on the proprietors. The forts were strengthened and new stations formed in the interior. In 1749 a question arose in parliament concerning the rights of the company, which was decided in their favour. In 1782 several of their establishments were taken by the French, under La Perouse, nevertheless their traffic appears to have been very profitable until their rights of territory and trade were invaded by a rival association called the North-West Company, whose fierce competition caused much animosity, and even bloodshed, proved very injurious to the Indians, and destructive to the fur trade. In 1813 an agricultural settlement was founded by Earl Selkirk on the Red River, which suffered greatly from the incursions of the Indians incited by the North-West adventurers, who in a wild foray slew Governor Semple, the head of the British settlement.

When the partnership of the North-West associates was about to expire in 1821, three gentlemen in London, Edward Ellice, Esq., and W. and S. M'Gillivray, who repre-

sented in England the interests of the wintering partners of the North-West traders in America, offered to merge their interests in those of the Hudson's Bay Company: this was assented to, and in 1821 an act of Parliament was passed, under which the Crown granted to the Hudson's Bay Company, and to the three representative agents of the North-West Association in London and Montreal, a licence of exclusive trade for 21 years, in what were termed the "Indian territories," that is, over those tracts which might not be included in the grant of Charles II., and also over those tracts which, by mutual consent, were open to the subjects of England, and to those of the United States. The three North-West Association agents merged into the Hudson's Bay Company; the exclusive trading licence was surrendered in 1838, and, after careful examination and investigation, on 30th May, 1838, the crown granted, under covenant, another licence for 21 years of exclusive trade over the aforesaid Indian and neutral territories. These licences which extended "to those parts in North America beyond the limits of the charter which the Hudson's Bay Company at present enjoy," (see Board of Trade letter, 2nd of June, 1837, in Parliamentary papers of 8th August, 1842,) in nowise invalidated or questioned the rights possessed by the Hudson's Bay Company, under the Royal Charter of 2nd May, 1670, which has been recognised by various treaties and acts of Parliament.

Previous to the recent Oregon treaty, the Hudson's Bay Company had formed settlements on the Columbia River, and some of its servants and retired officers established an agricultural farm at Puget Sound, south of the 49th parallel, and within the present American territories; but the Oregon treaty expressly guaranteed the "possessory rights" of the Hudson's Bay Company in the United American States, and of course thus acknowledged the possessory rights of the Hudson's Bay Company north of the 49th parallel. In the trading licence of 1838, the crown reserved to itself the right of establishing any colony in the territory over which the licence extended: hence the power now exercised by the crown of disposing of Vancouver's Island, by vesting it in the Hudson's Bay Company under certain conditions.

Constitution and Working of the Hudson's Bay Company.—The Hudson's Bay Company, according to the printed list of 17th

November, 1847, consists of 239 proprietors, representing a capital stock of £400,000. The affairs of the corporation are managed by a governor, deputy-governor, and committee of seven, elected by proprietors holding each not less than £900 stock for six months previous to voting, except such stock be acquired by bequest, marriage, &c. Of the 239 proprietors, 55 have more than two votes. Each member of the committee must hold not less than £1,800 stock. The charter of 1670 prescribes the mode of election, oaths to be administered, &c.; authorises the governor and company to make laws and ordinances for the good government of their territory, and the advancement of trade, and to impose penalties and punishments not repugnant to the laws of England. The company has, accordingly, established, at the Red River Settlement, at a considerable expense, a governor, council, recorder, sheriff, coroner, &c., for the due government of the affairs of the Assiniboia or Red River territory, and for the careful and legal administration of justice throughout Rupert's Land.

Trial by jury, although not enjoined by the Royal Charter of 1670, was introduced into the Red River settlement by Sir George Simpson, under the directions of the Hudson's Bay authorities in England. It appears that crime is comparatively rare in Rupert's Land, and that justice is effectively and mercifully administered under the same safeguards that exist in England.

The fur and peltry traffic of the Company is regulated by a Deed Poll, bearing date 26th March, 1821, on the junction of the North-West traders with the Hudson's Bay Company; and by another Deed Poll, bearing date 6th June, 1834, "for ascertaining the rights and prescribing the duties of the chief factors and the chief traders, and for conducting the trade." The Deed Poll of 1821 was a co-partnership for 21 years between the Hudson's Bay Company and the representatives of the North-West Company, on the basis that each should provide an equal capital for carrying on the trade. The expenses of establishments in England and America to be paid out of the trade, and no expense relating to colonization, or to any business separate from trade, to form a charge on the concern. Profits were divided into 100 shares, of which 40 were divided between the chief factors and chief traders, according to profit and loss; if a loss occurred in one year on these 40 shares, it was

to be made good out of the profits of next year. Inventory, general account, and tariff of goods, to be made out yearly on 1st June; and if profits were not paid to parties within 14 days after 1st June, interest allowed of five per cent.

The governor and company appointed governors to preside at councils of chief factors, who carried into effect all acts authorized by the charter. Senior chief traders assisted in forming council, if there were not seven chief factors present; each member of council had a vote; two-thirds formed a majority for decision. Three chief factors must be present, besides the president, to constitute a council. By the Deed Poll of 1821, there were 25 chief factors and 28 chief traders appointed, who were named in alternate succession from the Hudson's Bay Company, and North-West Company's servants.

The servants of both companies were placed on an equal footing; the 40 shares out of the 100, were sub-divided into 85 shares, and each of the 25 chief factors was entitled to 2 shares or $\frac{2}{25}$ th, and each of the 28 chief traders to $\frac{1}{85}$ th,—the remaining 7 out of the 85 shares were appropriated to old servants, in certain proportions, for seven years.

The chief factors superintend the business of the company at the respective stations, and the chief traders under them carry on the trade with the Indians. The clerks serve under both; the humblest clerk, who goes out from the Orkneys or elsewhere, by good conduct may rise to the chief positions in the service of the company. The salaries of the clerks vary from £20 to £100 per annum. The chief factors and traders who winter in the interior are allowed, in addition to their share of profits, certain personal necessities free of charge; they are not of course permitted to carry on any private trade for themselves with the Indians; strict accounts, inventories, valuations, &c., are required of them annually, and the councils at the respective posts have power to mulct, admonish, or suspend any of the company's servants. Three chief factors and two chief traders are allowed to leave the country annually for one year. A chief factor or a chief trader, after wintering three years in the service of the company, may retire and hold his full share of profits for one year after retiring, and half of the share for the four ensuing years if he winters for five years, then half for six years.

Three chief factors, or two chief factors and two chief traders, are allowed to retire annually according to rotation. The representatives of a chief factor or chief trader, who may die after having wintered five years, receive all the benefit to which the deceased himself would have been entitled had he lived; and in like proportions for less duration of service.

The accounts are kept with great accuracy, the business conducted with punctuality, and the whole machinery of the company is worked with order and economy, under the watchful care of a governor and committee in London. Sales are made by public auction of furs or peltry, several times in each year, at the company's premises in London. There is no upset price for the goods: they are sold to the highest bidder. The company has no monopoly, as some suppose, of the importation of furs, &c., into England; they have to compete with the furs of the United States of America, of Russia, Norway, &c., and if other traders can sell lower than the company, the public have, of course, the benefit. Beaver and other skins are now sold at much lower prices than formerly, and the steady supply from the Hudson's Bay territories has materially tended to the reduction of the price of foreign furs and skins, and has made "London undoubtedly the most extensive market for furs in the world." [*Greenhow's Hist. Oregon*, p. 412.]

Caprice, fashion, changes in trade, or in the use of the different articles for manufacture, materially influences the price of goods; thus, for instance, the introduction of silk hats has much reduced the price of beaver skins and other furs. The fall in the price of all skins has been very great, but as beaver constitutes the largest item in value, the reduction of profit to the company will be seen by a comparison with the prices and amount of sales. Price of beaver skin, in 1839, 27*s.* 6*d.*; in 1846, 3*s.* 5*d.*; number of skins sold in 1839, 55,486; in 1846, 45,389; sale proceeds in 1839, £76,312; in 1846, £7,856.

There is also great variety in the prices of articles of similar denomination. At the sales on 30th August 1848, two lots of otter, 66 in the lot, sold for 33*s.*; another lot, with 72 in it, sold only for £1 11*s.* Fisher skins varied from 26*s.* 3*d.* to 3*s.* each; bear skins, 45*s.* to 12*s.*; martens, 14*s.* 8*d.* to 3*s.* 1*d.*; silver fox from £7 to 2*s.* per skin. But the Hudson's Bay Company are obliged to pay the same price to the Indians for all skins,

according to tariff; whether the skins be good or bad, the company must buy them. By the time these skins are conveyed from the interior to the coast, warehoused, and shipped, their cost is greatly enhanced, irrespective of loss by damage, interest of money, insurances, &c. The profits of the shareholders are not therefore to be estimated by the difference in price between the cost of a skin at one of the company's forts in the interior, and its sale price in London. There are the heavy charges of different forts in the north-west territories—the losses by non-fulfilment of contracts (for the Indians, like the Eastern nations, almost invariably require advances, and always endeavour to be in debt to the Company)—the deficiency of skins or furs in scarce seasons—and the reduction in price at home—the long period for which the company lose interest on their outlay, from the time of the transmission of their goods from London, to the re-payment of the same in five, six, or sometimes seven years, by the fur sales in London, as the company always keep one year's stock of goods on hand in their territories; the expense of obtaining and transmitting food is often a heavy item, for at many of the company's forts, the poor Indians would perish during unusually inclement winters, when the buffalo and deer flee from the wind-swept plains to the shelter of the woods.

Whatever be the profits, after paying the whole expenses at home and abroad, they are divided, according to the provisions of the Deed-Poll just quoted, into fifths; of which three go to the proprietary, and two among the chief factors and chief traders of the company, instead of salaries. Considerable expenditure is necessary to try new districts, which sometimes, however originally promising, are ultimately found not to answer, and the establishments have to be withdrawn at a loss. The expenses incident to the Red River settlement are also a drain. The annual dividend is now about six per cent.

The Hudson's Bay Company have now about 136 establishments, besides hunting expeditions and shipping, affording employment to 25 chief factors, 27 chief traders, 152 clerks, 1,200 regular servants, besides occasional labour in boating and other services of a great number of the natives; a steam vessel and five sailing vessels of 100 to 300 tons, all armed. Their forts or stockaded positions extend from the coast of

Labrador, westward to the Pacific, and from the northern boundaries of Canada to the confines of the Arctic Ocean. Several medical officers are maintained for different forts, and at every large trading establishment; there is in fact an "Indian hospital" from which the natives derive the greatest benefit, as they resort thither in great numbers when suffering from age, infirmities, or other causes. Ministers of the Gospel of every denomination are protected and encouraged by the company, and a bishop of the church of England has been recently nominated for the newly created diocese of Rupert's Land.

Physical Aspect, Forts, and Stations.—It is difficult to convey an idea of the aspect of the vast territory belonging to the Hudson's Bay Company, or of that included in their trading licence. A large portion of the country east of the Rocky Mountains consists of inland seas, bays, lakes, rivers, swamps, treeless hills and hollows, "tossed together in a wave-like form, as if the ocean had been suddenly petrified while heaving its huge billows in a tumultuous swell."—*Simpson's Life and Travels.*

Beginning with the coast of Labrador, the prevailing features from 50° to 60° N. lat., and from 56° to 78° W. long., are, so far as we know, rocks, lakes, swamps, and mountains.

From the coast of Labrador, a ridge of table land runs nearly south-west to the source of the Ottawa river, and divides the waters which flow into the River and Gulf

of St. Lawrence, from those which flow into Hudson's Bay; it may be considered the south-eastern boundary of the Hudson's Bay Company's territories. From the Ottawa this ridge (table land, or division of waters,) takes a generally west direction till it reaches the Rocky Mountains, in about 115° W. long., separating the waters of Rainy Lake River, Red River, and the Saskatchewan, which have their embouche in Hudson's Bay, from the Mississippi and Missouri, which flow into the Gulf of Mexico. This very slightly elevated feature was formerly considered to represent the boundary between the Hudson's Bay Company and the United States, to the westward of the source of Rainy Lake River. The treaty of 1818, defined Rainy Lake River, the Lake of the Woods, and the 49th parallel of latitude as far west as Rocky Mountains, as the boundary; and by the recent treaty, 15th June, 1846, the 49th parallel of latitude has been continued as the boundary west of the Rocky Mountains to the Pacific Ocean.* The Rocky Mountains have their northern extremity in the Arctic Ocean, lat. 70° N. long. 140° W., and run nearly S.S.E., parallel with the west coast, forming the eastern boundary of the Oregon region, sending off, at different places, spurs and buttresses, and dividing the waters that flow into the Atlantic from those that flow into the Pacific.

At Mount Browne, 16,000, and Mount Hooker, 15,700 feet high, in lat. 52° 30' N.,

* The following is the second article of the treaty of 9th August, 1842, defining the boundaries between the United States and Canada:—"Article II.—It is moreover agreed, that from the place where the joint commissioners terminated their labours under the sixth article of the treaty of Ghent, to wit, at a point in the Neebish Channel, near Muddy Lake, the line shall run into and along the ship channel between St. Joseph's and St. Tammany Islands, to the division of the channel at or near the head of St. Joseph's island; thence turning eastwardly and northwardly around the lower end of St. George's or Sugar Island, and following the middle of the channel which divides St. George's from St. Joseph's Island; thence up the east Neebish Channel nearest to St. George's Island, through the middle of Lake George; thence west of Jonas' Island into St. Mary's River, to a point in the middle of that river about one mile above St. George's or Sugar Island, so as to appropriate and assign the said island to the United States; thence adopting the line traced on the maps by the commissioners, through the River St. Mary and Lake Superior, to a point north of Ile Royale in said lake, 100 yards to the north and east of Ile Chapeau, which last-mentioned island lies near the north-eastern point of Ile Royale, where the line marked by the commissioners terminates; and from the last-mentioned point south-westerly

through the middle of the sound between Ile Royale and the north-western mainland, to the mouth of Pigeon River, and up the said river to and through the north and south Powl Lakes, to the lakes of the height of land between Lake Superior and the Lake of the woods; thence along the water-communication to Lake Saisaginaga and through that lake; thence to and through Cypress Lake, Lac du Bois Blanc, Lac la Croix, Little Vermillion Lake, and Lake Namecan, and through the several smaller lakes, straits, or streams connecting the lakes here mentioned, to that point in Lac la Pluie, or Rainy Lake, at the Chaudière Falls, from which the commissioners traced the line to the most north-western point of the Lake of the Woods; thence along the said line to the said most north-western point, being in lat. 49° 23' 55" N., and in long. 95° 14' 38" W., from the observatory at Greenwich; thence, according to existing treaties, due south to its intersection with the 49th parallel of north latitude, and along that parallel to the Rocky Mountains. It being understood that all the water-communications, and all the usual portages along the line from Lake Superior to the Lake of the Woods, and also Grand Portage from the shore of Lake Superior to the Pigeon River, as now actually used, shall be free and open to the use of the subjects and citizens of both countries."

two of the loftiest peaks of the "Rocky Mountains," a dividing range of moderate hills runs to the north-east, from whence flows some of the branches of the Saskatchewan, Churchill, or English River, Deer Lake, Winnipeg Lake, and those streams which feed Wollaston Lake, Athabasca Lake, Slave Lake, and also several other lakes. It is, however, difficult to say what waters flow towards Hudson's Bay, or towards the Arctic Sea, as several of the lakes have different outlets, and each lake communicates with another,—the Great Slave Lake, with Lake Athabasca; Lake Athabasca, with Wollaston and Deer Lakes, the latter descending by Churchill River into Hudson's Bay. For instance, the Oungigan or River of Peace descends from a ridge of the Rocky Mountains towards Lake Athabasca, or the Lake of the Mountains; when high it flows into the lake, but when low it receives the lake waters, and flows towards the Great Slave Lake, under the name of the Slave River. Winnipeg, Winnipegos, and Manitoba Lakes, receive the waters of the Saskatchewan, Assiniboine, and Red River, and communicate with Hudson's Bay by the Nelson, and other rivers and conduits.

Mackenzie River runs northerly in its shallow course from the Rocky Mountains to the Arctic Ocean, in lat. 69° N., long. 135° W., but communicates in its progress with the Great Bear and Great Slave Lakes; excepting this, and also the Copper Mine and Back's Rivers, the course of all the other rivers and lakes of North-West America, east of the Rocky Mountains, would appear to be to the eastward, towards which the whole country dips.

Viewing, therefore, the whole of the territories between the Rocky Mountains and Hudson's Bay, north of the 49th parallel, as one region, it may be considered as a series of lakes, rivers, and plains, with a gradual elevation from east to west. The northern territory, which was very imperfectly explored until the recent journeys of Dease, Simpson, and Rae, from 1837 to 1847, is intersected with lakes, marshes, and rivers to a greater extent than any part of the known globe; and it would seem as if the inner springs of the earth there burst forth. Some parts investigated are truly regions of desolation: vegetation ceases in the latitude of 60° north:—no land is seen capable of cultivation; the whole surface is rugged and uneven, and the open valleys nearly devoid of all vegetable productions. The

soil at Churchill Fort (one of the Hudson's Bay Company's stations, in lat. 59° N.) on the shores of the bay, is extremely barren, rocky, dry, and without wood for several miles inland; a few garden vegetables are with difficulty reared. At York Fort, in lat. $57^{\circ} 2'$, long. 93° W., the soil is low and marshy, and equally unproductive; and, though the trees are larger than those inland of Fort Churchill, they are still knotty and dwarfish. The country around the factory, although elevated above the river, is one entire swamp, covered with low stunted pine, and perfectly impenetrable, even in July, when it is infested by clouds of mosquitoes. The land seems to have been thrown up by the sea, and is never thawed during the hottest summer, with the thermometer at 90° to 100° in the shade, more than 10 or 12 inches, and then the soil is of the consistence of clammy mud; even in the centre of the factory it is necessary to keep on the platforms to avoid sinking over the ankles. About Albany Fort, in 52° N., and Moose Fort in $51^{\circ} 28'$, the climate is more temperate, the soil better, and potatoes and garden produce are reared, but with difficulty. Proceeding farther west, the temperature improves, but all around Hudson's Bay, particularly at Fort Churchill, the climate is extremely severe; and from the middle of October to the middle of May, the country is buried under snow. The ice does not break up generally until July, and at York Fort, two degrees south of Churchill, the thermometer in January has been at 50° below zero. Even in rooms at the factory, where a fire is perpetually kept up, brandy freezes into a solid substance: the rivers and lakes, 10 to 12 feet deep, are frozen to the bottom, and the Hudson's Bay Company's European servants are obliged to observe the greatest caution against the effects of the cold air, which is frequently filled with small particles of angular ice, and when driven by the wind against the face or hands, raises the skin in white blisters, which break out in thin watery issues. As soon as a room is thoroughly heated, and the embers burnt down, the top of the chimney is closed so as to exclude the air, yet the walls of the apartment are found covered with ice two to three inches thick. In the *Quarterly Review*, No. xlix. vol xxv., 1821, Sir John Barrow thus adverts to a similar occurrence on board Captain Parry's ships, *Hecla* and *Griper*:—"The month of March set in mildly (at their retreat in Winter

Harbour) so that the solid ice, which for some time had lined the ship's sides, began to melt. It therefore became necessary to scrape off this coating of ice, on which occasion Captain Parry observes—"It will, perhaps, be scarcely credited, that we this day (8th March) removed above one hundred buckets full, each containing from five to six gallons, being the accumulation which had taken place in an interval of less than four weeks; and this immense quantity was the produce chiefly of the men's breath and of the steam of their victuals during meals." The Europeans in the service of the Hudson's Bay Company, notwithstanding their precautions, and the use of a large quantity of woollens and furs, are frequently frost-bitten, and many of the natives fall victims to the severity of the climate. The sun is often obscured for weeks by thick fogs, caused by clouds of watery vapour ascending from the sea, which, being condensed by cold, hang all around the coast, and extend inland to a considerable distance. The "mock suns" and moons, called Parahelia and Paraselene, appear very frequently in the coldest months. The temperature of the air is subject to the most capricious variations; rain sometimes falls abundantly with a serene sky, or the sun will burst forth in the midst of the heaviest showers. Such is the region in which several of the Hudson's Bay Company's establishments are situated, and which could not be maintained but for the possession of some more temperate regions, from whence food is procurable.

Hudson's Bay, discovered by John Hudson in 1610, is about 900 miles in length, by 600 at its greatest breadth, with a surrounding coast of 3,000 miles, between the parallels of 51° and 65° N. lat. The coasts are generally high, rocky, rugged, and sometimes precipitous. The bay is navigable for a few months in summer, but for the greater part of the remainder of the year is filled up with fields of ice. The navigation, when open, is extremely dangerous, as it contains many shoals, rocks, sand banks, and islands; even during the summer icebergs are seen in the straits towards which a ship is drifted by a squall or current, rendering it very hazardous for the most skilful seamen. The transitions of the thermometer in summer are from 100° to 40° in two days, and the torrents of rain are surprising: whether in winter or summer, the climate is horrible; the range of the thermometer throughout the year is 140°. The sea is entered by

Hudson's strait, which is about 500 miles long, with a varying breadth, and with an intricate navigation through several islands, viz.: Charles, Salisbury, Nottingham, Mansfield, and Southampton. The principal bays and inlets in this great inland sea, are, James's Bay, in the south-east, which is 240 miles deep by 140 wide; Button's Bay, and Port Nelson, on the western coast; Chesterfield Inlet on the north-west, which, after stretching far into the interior, terminates in a fresh water lake; Roe's Welcome, a deep strait on the north coast, and also Repulse Bay.

We may now examine the country between Hudson's Bay and the Rocky Mountains, commencing with the lakes and rivers. The Great Bear Lake, the most northerly, is 150 miles in diameter, and communicates by Lake Martin with the Great Slave Lake, which is estimated at 260 miles from E. to W., and 30 from N. to S. Captain Back considers it as large as Lake Michigan; its soundings are from 40 to 60 fathoms. The north side of the lake is an entire jumble of rocks and hills; the south is level, not a hill or stone to be found. The Great Slave River joins this lake to that of Athabasca, which is 180 miles long and 15 broad—receives the Peace, Athabasca, and Stone rivers; the latter river forms the channel which conveys a portion of the waters of the Wollaston Lake (situated on table land) into Athabasca Lake; another portion of the waters of Wollaston Lake flows in a contrary direction through Deer Lake and River into the Missinippi, Churchill, or English River, which forms several smaller lakes, and finally disembogues into Hudson's Bay, at Fort Churchill, in lat. 55° 45' N., long. 94° 25' W.

Lake Winnipeg, in lat. 50° 20' to 53° 45' N., is 240 miles long, and from 5 to 50 broad. It receives the river Saskatchewan, as it flows from the Rocky Mountains and northern ridge; also the Red and Assiniboine rivers, and discharges itself into Hudson's Bay by the Nelson and other rivers. Winnipegos and Manitoba are branch or tributary lakes to Winnipeg.

That the trend of the land, and the dip, is towards Hudson's Bay and the eastward, is evident from the course of the Red River, which rises in about the parallel of 46°; flows to the northward across the American boundary parallel of 49°; joins the Assiniboine, or Nadawosis River, at Fort Garry, in 50° N. lat., and then disembogues into

the south-western part of Lake Winnipeg, which, as before stated, discharges into Hudson's Bay. The Moose River, which flows from the dividing ridge of highlands, which separates the Hudson's Bay territories from Canada, runs for 230 miles in a north-east direction, and has its embouchure in James's Bay, lat. $51^{\circ} 10' N.$, long. $81^{\circ} W.$

The country between the sources of the Assiniboine, in $51^{\circ} 15' N.$, and the Red River, is almost a continued plain, the soil of sand and gravel, with a slight intermixture of earth, which produces a short grass; but trees are rare. The country around the southern part of Lake Winnipeg is well wooded and watered, and abounds at seasons with herds of buffalo and deer; so also contiguous to the Winnipegos Lake and Swan River, and along the route from Carlton to Isle à la Crosse Forts in the 55th parallel. The northern part of Lake Winnipeg is composed of banks of naked black and grey rock. Farther north, occasionally greener spots are to be met with: some of the islands in the Great Slave Lake are clothed with tall poplars, birch, and pines, and well stocked with deer. Near the portage La Loche is a precipice upwards of 100 feet above the plain, from whence, according to Mackenzie, there is a "ravishing prospect:"—the Swan (Pelican, or Clear Water) River meanders for thirty miles through a valley about three miles in breadth, confined by two lofty ridges of equal height, displaying a delightful intermixture of wood and lawn. Some parts of the inclining heights are covered with stately forests, relieved by verdant promontories, where the elk and buffalo enjoy delicious pasturage.

The route from the Red River settlement (Fort Garry) to Fort Chipewyan, on Lake Athabasca, was traversed in December, 1836, by Mr. Thomas Simpson, by the following stages, in a very short space of time:—

	Miles.	Days.
Fort Garry (Red River) to Fort Pelly	394	in 15
Fort Pelly to Fort Carlton	276	" 12
Carlton to Isle à la Crosse	236	" 7
Isle à la Crosse to Fort Chipewyan	371	" 12
Total	1277	in 46

These, and other forts and stations, are necessarily wide apart, and in situations favourable to water communications, and to procuring animal, or, if possible, vegetable food. The aspect of the country in which these forts are constructed, I have gathered from the observations of Mr. Simpson.—

Fort Garry, the principal station of the Red River Settlement, is situated at the forks of the Red and Assiniboine rivers, about fifty miles from Lake Winnipeg, and is environed by plains; proceeding north-west the country is studded with a few copses of poplar and dwarf oak; but the greater part having been swept in 1835 by the running fires (so frequent and terrible in the prairies), presented a blackened and dismal aspect. There were a number of small natural mounds on which lay fragments of limestone, the great basis of the plain region, and quantities of little shells were strewn about in every direction.

The soil and climate about Manitoba, or "Evil Spirit" Lake, is similar to that of the Red River. At Winnipegos Lake the oak region terminates; but the shores are clothed with elm, poplar, and a few ash, birch, and pine-trees. The water in this lake is brackish in summer. At Duck Bay the first wood of pines was seen. The route from thence to Fort Pelly, south-west, lies through swampy meadows, alternating with woods of poplar, fringed with willow, and a few straggling clumps of pine in the neighbourhood of the Swan River and Duck Mountain, with its "rude and impassable heights." Thence west to north lie the Porcupine Hills, wooded to the very summit. Thunder Hills are about two miles in breadth, steep; and beyond them to the northward is Fort Pelly, in $51^{\circ} 45' 20' N.$ lat.— $102^{\circ} 5' W.$, near the bank of the Assiniboine River. The track thence to Fort Carlton, lies through gently undulating eminences along the wooded banks of the tortuous Assiniboine, thence due west, leaving the Assiniboine far to the south, over a hilly country, tolerably wooded, and abounding in small lakes and swamps to the west end of Stoney Lake, through a country consisting of narrow plains, studded with clumps of poplar, interspersed with little lakes and swamps; a great part of this district had been recently overrun by fire. Changing the course from west to west-south-west, the traveller reaches the immense prairies of the Saskatchewan River, of which entire tracts are frequently bared by fire to the very soil. The cold in these plains in winter, with the wind from the westward, is terrific; there is not a shrub or even a blade of grass to break the force of the blast, whose temperature is at least 40° below zero. The only exposed part of the traveller, the eye-lashes, becomes speedily

covered with a heavy crop of icicles, which the half-frozen fingers have a difficulty in removing. These plains are frequented in summer by the Indians as hunting grounds, although the fierce heat is then little more endurable than the cold in winter. Throughout this country, says Sir George Simpson, everything is in unparalleled extremes. Cold and excessive heat,—long droughts balanced by drenching rain and destructive hail (sometimes $5\frac{1}{2}$ inches in circumference). At one period both whites and natives are living in wasteful abundance on venison, buffalo, fish, and game—at others reduced to the last degree of hunger, often passing several days without food. In 1820, when wintering at Athabasca Lake, Sir George Simpson says, he was for three days and nights without a morsel of food. Frequently hundreds of fine buffaloes are killed for the tongues alone. On one occasion Sir G. Simpson saw several thousand buffaloes putrifying the air for miles around. Unsheltered plains extend far to the south, to the ridges in lat. 49° , whence the Missouri descends. One of the prairies of the Saskatchewan crossed by Mr. Simpson, was fourteen miles wide, and only a few willows were thinly scattered on its surface. The country south of the Saskatchewan towards Assiniboine, has in various places lakes as salt as the Atlantic Ocean. As this region, which extends to the Rocky Mountains, has been erroneously considered adapted for European colonization, the following extract from Mr. Thomas Simpson's Journal may help to dispel the illusion. "Christmas Day, Sunday, the 25th: On shaking off our slumbers this glad morning, a troop of wolves were 'baying the moon,' as she rode in a cloudless sky. The country before us being intricate, we could not start till daylight; and when we sallied forth on our day's march, the weather had moderated. About two miles from our resting-place, we passed over a round hill, and stood awhile on its summit to enjoy the boundless prospect. From west to south stretched a vast plain, separated from another, of which we had a bird's-eye glimpse to the north-east, by the broad belt of woods which we had been skirting along; while before us, in our line of march, lay outspread a seemingly endless tract of open underwood, varied by gently swelling eminences. For seven miles our route led west-north-west, through thickets and over hillocks; it then changed to west for fourteen miles, through a more

open country, consisting of rising grounds, or "*côteaus*," with bare ridges, and sides clothed with dwarf poplar and brushwood; while here and there, in the hollows, we crossed large ponds, scarcely deserving, on this continent, the title of lakes. They have no outlet; and on cutting through the ice for water, we generally found it putrid: such, however, is its scarcity in that level country, that we were often fain to use it when most nauseous, taking the precaution of imbibing it through snow, which purifies it in some degree. We now turned west-south-west for eight miles, keeping along a broad and rather winding ridge, which appeared to furnish the buffalo with a regular road of ingress to the woods. Several tracks of moose-deer were also seen during the day. After sunset, we took up our quarters in a small clump of poplars. The whole country having been ravaged by fire, we could not find dry grass, as usual, for our beds, and spread our Christmas couch on willow branches; rough indeed, but rendered smooth to us by health and exercise."

Several of the Hudson's Bay Company's forts are situated in the country N. W. of the Red River. *Fort Pelly* is a compact, well-ordered post on the route from Fort Garry, on the Red River, to Fort Carlton. It is sheltered on the north by a range of woods, and has the Assiniboine River in front; the cold in December is terrific, sometimes— 44° , equal to 76 degrees of frost.

Carlton Fort is situated on the south side of the Saskatchewan River, and is defended by high palisades, and a gallery surrounding the whole square, planted with wall pieces, into which, however, the Indians fired several times during the summer of 1835. Provisions were unusually scarce, when visited by Mr. T. Simpson in 1836, the great fires in autumn having driven the buffalo to a distance. The route to Fort La Crosse lay first through an open country consisting of low, round, grassy hills, interspersed with clumps of poplar, occasionally of pines, and with many small lakes to the boundary of the pine forest, in lat. $53^{\circ}30'$ north; thence hills, lakes, lakelets and brooks, to a hilly tract of fourteen miles in extent, which divides the waters that flow towards the Saskatchewan and Churchill Rivers. From Green Lake to Beaver River is swampy and wooded; and thence to Long Lake chain are pine woods. Fort La Crosse, in $107^{\circ}54'30''$ W. on the border of the lake, is neat and compact; the country around low

and swampy. At the portage La Loche, north of Fort Crosse, the hills are a thousand feet in height, steep, and command a fine view of the Clear water River, and its picturesque valley; thence to the confluence with the Athabasca River, whose broad bosom is studded with numerous islands that give it a lake-like appearance.

At Fort Chipewyan, lat. $58^{\circ} 43' 38''$ N., long. $111^{\circ} 18' 32''$ W., the surface consists of rocks and swamps, and the climate precludes all prospect of rearing farm produce; even potatoes have to be brought down from Fish River; and when the coarse grass, cut in the swamps for the use of the few horses and oxen required for drawing fire-wood to the fort, fails, fish from the Athabasca river is the only provender obtainable for the cattle. Fort Edmonton is situated on the northern branch of the Saskatchewan River, in lat. $53^{\circ} 45'$ N. long. $113^{\circ} 10'$ W., and was visited by Sir G. Simpson in his progress from the Red River to the Columbia and Fort Vancouver. The fort is of an hexagonal form, well built, with high pickets and bastions, and battlemented gateways; it is on an almost perpendicular height commanding the river. The fort is painted inside and out with devices to suit the taste of the savages who frequent it. Over the gateways are a fantastic pair of vanes, and the ceilings and walls of the hall present gaudy colours and fantastic sculptures, which the Indians admire. The buildings are smeared with red earth; the savages are awed by so much finery, and respect what appears to them grand structures.

The settlement on the Red River, distant from Montreal, by the Ottawa River, about 1,800 miles, in lat. 50° N., long. 97° W., is elevated 800 feet above the sea, in a level country, contiguous to the wooded borders of the Red and Assiniboine Rivers, along which the settlement extends for fifty miles. The soil is comparatively fertile, and the climate salubrious, but summer frosts generated by undrained marshes, sometimes blast the hopes of the husbandman. The Hudson's Bay Company, by the introduction, at a great expense, of rams and other stock, have improved the breed of domestic animals, which are now abundant: wheat, barley, oats, maize, potatoes, and hops thrive; flax and hemp are poor and stunted. The river banks are cultivated for half a mile inland, but the back level country remains in its natural state, and furnishes a coarse hay for the settlers' stock during the long

and severe winter, which lasts from November to April, or May, when Lake Winnipeg is unfrozen, and the river navigation to Hudson's Bay commences, *via* Norway House entrepôt, at the northern extremity of the lake.

The population is in number about 8,000, consisting of Europeans, half-breeds, and Indians. The two principal churches, the protestant and Roman catholic, the gaol, the Hudson's Bay Company's chief buildings, the residence of the Roman catholic bishop, and the houses of some retired officers of the fur trade, are built of stone, which has to be brought from a distance; but the houses of the settlers are built of wood, whitewashed or painted externally.

Land is granted to the settlers at $7s. 6d.$ per acre; there is no restriction but in the purchase or sale of furs and spirits, and only a slight import duty is imposed on other commodities, the proceeds of which duty are received by the municipality of Assiniboine.

The colony is governed by a corporation called the Council of Assiniboia, which, in virtue of the Royal Charter of 1670, exercises judicial as well as legislative authority, under an able Recorder.

The currency is one of the best established in any colony. It consists, with the addition of silver and copper coin, of notes issued by the Hudson's Bay Company, which are payable at York factory, by bills on the company in England. This circulation is absolutely essential; gold or silver would soon be hoarded, melted, or lost; and a note issued by the government of the place, receivable in payments, of acknowledged exchangeable value, devoid of fluctuation in exchanges, and convertible, without loss or risk, into cash in England, is an advantageous monetary circulation for any settlement, and not a grievance or subject of complaint. Commodities to the full value of the notes can always be obtained at New York, Montreal, &c.

The population of the Red River settlement, in 1843, was 5,143, of which number, 2,798 are Roman catholics, and 2,345 are Protestants. The heads of families are 870; of whom 571 are Indians or half-breeds, natives of the territory; 152 Canadians; 61 Orkney men; 49 Scotchmen; 22 Englishmen; 5 Irishmen; and 2 Swiss. Wales, Italy, Norway, Denmark, Germany, Poland, and the United States of America, have each contributed one to the list. There is also

one Esquimaux Indian. There are 730 dwelling-houses, 1,219 barns or stables, 18 windmills, and 1 water-mill. There are 182 horses, 749 mares, 107 bulls, 2,207 cows, 1,580 calves, 1,976 pigs, and 3,569 sheep.

The Bishop of Montreal says of the Red River settlement, that "it affords a wonderfully striking example of good brought by the hand of God out of evil." His lordship thus describes the churches there:—"Along the strip of settlement which occupies, with interruptions, the opposite sides of the river, the four English churches are situated. The Indian church is about 13 miles below the lower church at the rapids; this again is about 6 from the middle church; and the middle church about 7 from the upper. The Indian church is a wooden building, painted white, 50 feet or upwards in length, with a cupola over the entrance. It has square-topped windows, which, so far, give it an unecclesiastical appearance. The lower church is also of wood, and of the length of 50 feet. The middle church, which is not quite completed, and which has been built by the unaided exertions of the congregation, is an edifice of stone, 60 feet long. The upper church, which is also of stone, is 10 feet longer, and will accommodate 500 persons."

There are scattered about the Red River settlement several respectable retired factors or traders of the company; some married to European, more to native wives. Although the style of the establishments at the forts is exceedingly plain, and the extreme difficulty of transport, as well as the isolated character and remote situation of the place itself, cause a variety of articles to be dispensed with to which some of the inmates have been elsewhere accustomed, yet there is far from a deficiency to be witnessed there, either of comforts or of habits of refinement. Its communications with England—are for goods *via* Hudson's Bay—during the summer season, and for personal travelling and letters, *via* Montreal, from which the Red River is distant 1,800 miles. The company have, along this line, about 10 stockaded posts. The Bishop of Montreal traversed the distance in 38 days.

We may now proceed to examine the Pacific coast and the Rocky Mountains, whose highest ridges are in the parallels of 52° to 53° , about 8,500 feet. Some peaks rise to 15,000 and 16,000 feet, but the general range is 4,000 to 6,000 feet, diminishing in height towards the north. This granitic mountain chain is from 50 to 100 miles wide.

The country termed New Caledonia, between the Rocky Mountains and Cascade Mountains, near the coast of the Pacific, is well watered, undulating in bold swells, with occasional plains and copses, and an abundance of forest trees, of which the cedar, fir, and hemlock, grow to a prodigious size.

In New Caledonia, the Hudson's Bay Company have several stations, and also in the adjacent country. Fort Alexandria, in $52^{\circ} 30' N.$, is the residence of one of the company's chief traders, and here the navigation of Frazer's River is begun by the northern brigade on their way to the north. A small open space is cleared for a few cattle, but the rest of the country is covered with a dense forest. Fort Thompson, on the Kamloop's River, is in $50^{\circ} 38' N.$, and $120^{\circ} 7' 10'' W.$ Frazer's, Babine's, and McLeod's Forts are on the lakes of the same names. Fort St. James, on Stuart's Lake, was the residence of chief factor Ogden, who had charge of the New Caledonia department.

Frazer's River flows through New Caledonia, but is not navigated below Fort Thompson, owing to its dangerous falls. The distances from Fort Thompson to Fort Alexandria, by land, is 150 miles, and thence to Fort James 120. Commodore Wilkes says that the climate of this region is unfavourable to agriculture, in consequence of its being situated between the two ranges of mountains, viz., the Rocky Mountains on the east, and the Cascade Mountains (of the coast) on the west, both of which ranges are constantly covered with snow, and in the plains or villages snow lies from November to May six feet deep. The commodore adds, "there are many spots of fertile land along the rivers, but the early frosts are a great obstacle to agriculture. At St. James, Babine, and Frazer's Forts, only potatoes and turnips can be cultivated." Frazer's River has its embouche six miles to the north of the 49th parallel, which defines the United States' boundary. It is about a mile wide, the country around low, with a rich alluvial soil. Fort Langley is 20 miles from its mouth.

Sir George Simpson made a journey of 2,000 miles in 47 days from the Red River, *via* Fort Edmonton, to Fort Colville in 1841. He crossed the Rocky Mountains at the confluence of two of the sources of the Saskatchewan and Colombia, near Fort Kotanie, at an elevation of 8,000 feet above the sea, with mountains rising about half that altitude around. The descending country to the Kotanie River was rugged and

boggy, with thick and tangled forests, craggy peaks and dreary vales, here and there hills of parched clay,—where every shrub and blade of grass was brown and sapless,—as if newly swept by the blast of the sirocco; with occasional prairies and open swards, interspersed with gloomy woods or burning pine forests. In one place a valley was seen 30 miles long by six wide without a tree, and environed by mountains. The natives of these regions were in a wretched condition.

The coast abounds with harbours, inlets, and islands. The north-western Archipelago, which lies north of Vancouver's Island, belongs partly to England and partly to Russia. The islands within the British dominions are of various sizes; the largest, named "Queen Charlotte's Island," is somewhat of a triangular form, lying nearly north and south, the south point in the parallel of 52° . The superficial area is less than that of Vancouver's Island: it has several good harbours, viz., on the north coast, Port Estrada, near Sandy Point, and Croft's Sound, a little farther west. On the east side, Skitekis, in $53^{\circ} 20'$ N. lat.; Cummashawa, near 53° N.; and Port Sturges, farther south. On the west, or Pacific coast, Magee's Sound, in $52^{\circ} 1'$ N. lat.; and Port Ingram, near the north-west extremity of the island. The country around some of these harbours, especially Port Estrada (Hancock's River), and Magee's Sound, is said by the Americans to be fertile, and the climate comparatively mild.

Queen Charlotte's island is admirably adapted for the formation of a penal settlement, by its distance from England, its complete insularity, adaptation for the support of a large convict settlement by the labour of the prisoners, the impossibility of escape, the improbability of the transported being ever enabled to return to England, and by the useful purposes in which the convicts may be employed in the formation of a fortress and a colony in the Northern Pacific, contiguous to China and Japan.

The Princess Royal Islands lie nearer to the main land, between the parallels of 51° and 54° N. lat. Of the interior of the whole of these islands, little or nothing is known; the largest are traversed by mountain ridges in the direction of their greatest length from south-east to north-west. The adjacent coast is of very irregular outline, with numerous bays, inlets, and winding channels, forming a labyrinth of passages. Simpson's River, on our north-west boundary, has a deep inlet,

and communicates with Babine Lake, where the Hudson's Bay Company have a fort. The Company have also an establishment on Pitt's Islands, in the north-western Archipelago.

The north-west coast and interior, north of the parallel of 55° , is described as extremely rugged; lofty mountains, covered with snow, rise abruptly from the ocean; more inland, the whole region consists of Alpine masses, thrown together in the wildest confusion, so that a level site for a fort can hardly be found within any convenient distance from a stream or lake. It is a land of rocks, as difficult of access as it is impracticable in itself, except at the very margin of the sea. Most of the streams to the north of Frazer's River, are mere torrents fed by melting snow in summer, and in winter by the unceasing deluges of this dismal climate; these streams form deep valleys in the precipitous heights of every form and magnitude in their progress to the ocean. Hence the term "Cascade Mountains," given to the coast line north of Vancouver's Island. The company hold under lease from Russia, a fort on the Stikine or Pelly's River, where the climate and country are alike miserable in the extreme, and their effects are increased by the putridity and filth of the adjacent Indian village. At this fort, in April 1842, the gentleman in charge was shot in a scuffle, and 2,000 savages encamped around were preparing to rife the fort, when, fortunately, Sir G. Simpson arrived in a Russian steamer. Taco Fort, under Dr. Kennedy, an assistant, and 22 men, is still farther northward on the coast, surrounded by 4,000 savages, warlike and ferocious, who at first captured Dr. Kennedy and his assistant, and required for their ransom four blankets. The fort is now strong.

Fort M'Loughlin, on the north-west coast, near Milbank Sound, was formed in 1837, on one of the most rugged spots imaginable. By great and unwearied exertions for several years in blasting, levelling, and gravelling, the company's officers have made a strong fort on a rock capable of holding out with 20 men, against all the Indians of the coast. An enclosed surface of three acres has been covered with sea-weed and made into a garden, producing potatoes, carrots, turnips, cabbages, &c. It is probable that on the north-west coasts adjoining to Vancouver's Island, and Queen Charlotte's Island, many spots available for European colonization will be found. The climate on the coast of

the Pacific is much milder than similar latitudes on the Atlantic or opposite shores of the American continent.

Some of the principal forts belonging to the Hudson's Bay Company, are:—

1. *York Fort*—The most important station of the Hudson's Bay Company has control over the extensive region west and north of Hudson's Bay, bounded by the Arctic Ocean, the Rocky Mountains, and a line drawn from the bay through Rainy lake. Among the posts dependant on York fort, are, those of forts Churchill and Severn, and the forts or houses on the different lakes—viz. Trout, Beaver, Cat, Swampy, Split, Nelson, Deer, La Rouge, and La Crosse. There are also Rock-house on Hill river, and Oxford house, Holy lake. On the Saskatchewan, are the forts or stockaded houses, called Cumberland, Carlton, Manchester, Edmonton, Acton, or Rocky Mountain. On Lake Athabasca are forts Chipewyan, Wedderburn, and Fond du lac; on the Mackenzie river in its course to the Arctic Ocean, forts Simpson, Norman, and Good Hope; and on the upper part of the same river, forts Vermillion, Dunnegan, and Rocky Mountain.

2. *Moose Factory* is about 700 miles from the city of Montreal, in Lower Canada, and is the company's principal dépôt on the southern shores of Hudson's Bay. Connected with this establishment, there are numerous stations: some of which are at a distance from the Fort, varying from 100 to 250 miles. The forts and stations in the country between Hudson's Bay and the lakes in Canada, are under this superintendency. On James's Bay, are, Albany fort, East Mainfort, and Rupert's house. On the river Albany, are, Martin's Fall, and Osnaburg houses; on the Moose or Brunswick river, is New Brunswick house, and to the south-east, Frederick house. There are establishments on the small lakes Abbitibbe, Mistasiny, Big, Wagwanappy, and Temiscaming. The Indians, in this district of country, are principally of the Swampy Cree tribe, with a few Esquimaux at an establishment called Big River, which is about 250 miles to the north-east of Rupert's River.

3. *Michipicoten* is the principal factory belonging to the company on the shores of Lake Superior; within and around which, and the different establishments in that extensive range of country, there is a considerable population of Europeans and half castes, as well as of native Indians, who

are chiefly of the Ojibeway or Salteaux Indians. On the W. shore of Lake Superior is Fort William, and there is a post at the Falls of St. Mary.

4. *Lac la Pluie* is a trading post of the company, situated near the height of land which divides the waters falling into the St. Lawrence from those that fall into Hudson's Bay, and is distant from Montreal about 1,300 miles. The neighbourhood of this place is a great rendezvous for Indians from the surrounding country, during the summer, as the means of living on fish and rice are very abundant.

5. *Fort Alexander* is formed at the outlet of the River Winnipeg, and is distant from Montreal 1,500 miles. It is much frequented by the Indians, who, as well as those that visit Lac la Pluie, belong to the Ojibeway or Salteaux tribes.

6. *Edmonton* is an establishment on the Sackatchewan River, which has its source on the Rocky Mountains, and disembogues itself by Nelson River into Hudson's Bay. It is distant from Montreal 2,800 miles. From thence to the Athabasca River, which also has its origin on the Rocky Mountains, the establishments are frequented by the bold and daring prairie or plain tribes of Indians, including the Assiniboines, the Peiagans, the Sarcees, and the Blood Indians. The Thickwood Crees and Assiniboines amount, with the whites and mixed population attached to the station, to between 15 and 20,000 souls.

7. *Norway House*, one of the principal dépôts belonging to the company, is situated at the northern end of Lake Winnipeg, and is distant from Montreal 2,000 miles. There is an Indian village connected with this place, the inhabitants of which derive great advantages from the proximity of the company's establishment, where the Indians, who are a part of the Swampy Cree tribe, find permanent employment as fishermen, boatmen, and labourers. Beren's river house and Fort Alexander are also on Lake Winnipeg. At Ungava Bay, at the entrance of Hudson's Strait, there is a station for collecting the produce of the coast of Labrador, consisting chiefly of oil from the seal and porpoise; and there are establishments for taking and curing salmon, which is sent to the Quebec market.

The Hudson's Bay Company possess a very thriving establishment at Fort Vancouver, in the Oregon country, recently ceded to the United States.

POPULATION.—The best approximative estimate of the number of inhabitants in north-western America is given in an official report of Lieuts. Warre and Vavasour, as a "Census of the Indian Tribes in the Oregon

territory from latitude 42° to latitude 54°, derived from the trading lists of the Hudson's Bay Company, and from the best obtainable information: it is dated, "Fort Vancouver, 1845."

Name of the Tribe.	Where situated.	Males.	Females.	Children under 12 years.	Slaves.	Total.
Quacott.—Nuvette and 27 others. Tribes speaking generally the Quacott language.	From Lat. 54° to Lat. 50° including Queen Charlotte's Island; North end of Vancouver's Island, Milbank Sound and Island, and the main Shore	19,020	20,215	.	1,570	40,805
Massettes and 13 tribes, not included with the above, and speaking different languages.	On Queen Charlotte's Island, not included in the above	3,232	3,381	.	.	6,613
Nass Indians, 4 tribes speaking the same language.	Nass river on the main land	857	746	.	12	1,615
Chymisyans, 10 tribes, all of whom speak the same language, with a different idiom.	Chatham Sound, Portland Canal, Port Esington, and the neighbouring islands	1,202	1,225	.	68	2,495
Skeena Indians, 2 tribes.	At the mouth of the Skeena river	195	110	.	7	322
Labassas Indians, 5 tribes.	Gardner's Canal, Canal de Principe, Canal de la Reida	717	601	.	111	1,429
Milbank Sound, 9 tribes.	Milbank Sound, Caccade Canal, Deane Canal, Salmon river, and the islands on the coast	784	797	.	47	1,628
Challams.—Cowaitchims, 24 tribes, speaking the Challam and Cowaitchimi languages.	From lat. 50° along the coast south to Whitby Island in lat. 48°; part of Vancouver's Island and the mouth of Franc's river	3,176	3,383	.	2,868	9,427
New Caledonia Indians—8 tribes known).	M'Leod's Lake, Chelertins, Fort George, Alexandria in Fraser's river, Conally Lake, Babine Lake, Fraser's Lake, Stuart's Lake	1,265	1,150	.	210	2,625
Sanetch Indians, 3 tribes.	Straits of St. Juan de Fuca and Vancouver's Islands	194	152	99	.	445
Hallams, 11 tribes.	Ditto ditto	517	461	467	40	1,485
Sinahomish, 1 tribe.	Ditto ditto	208	118	230	13	569
Skatecat, 1 tribe.	Ditto ditto	173	161	191	18	643
Cowitchici, 7 tribes.	Ditto ditto	524	636	585	.	1,763
Seke Indians, 1 tribe.	Ditto ditto	39	39	12	.	■
Cowitchier, 3 tribes, not as yet ascertained (say)		.	.	.	.	300
Gulf of Georgia Indians, exact numbers not ascertained	Cape Flattery (about)	.	.	.	.	1,250
Nasqually, 13 tribes.	Nasqually river and Puget's Sound	1,835	1,997	.	182	4,014
Two tribes in Cavlets river (about)		.	.	.	.	500
Cheenoooks, Clatsops, and several tribes near the entrance of the Columbia river.	Mouth of the Columbia river and the vicinity	.	.	.	.	429
Trile Kalets, several tribes.	Near Fort Vancouver in the Columbia	.	.	.	.	500
Vule Puyas, several tribes	Valley of the Williamatu river	.	.	.	.	300
Clakamus, several tribes.	Valley of the Clakamus and the Willamuta Falls	.	.	.	.	200
Cheanoooks, Kelussuyas, 4 tribes.	Pillar Rock, Oak Point, The Dallas, The Cascades, Cheate river, Takama river on the Columbia	.	.	.	.	800
Killamooks, 3 tribes.	On the sea coast, between the river Columbia and the Umqua	.	.	.	.	1,500
Clamets, several tribes.	Roquas river near the south boundary	.	.	.	.	800
Walla-Walla, Nez Perce, Snakes, and several tribes.	One of the South or Snakes branch of the Columbia, extending to near the Rocky Mountains	.	.	.	.	3,000
Colville and Spokane.	Near Fort Colville on the Columbia	.	.	.	.	450
Okanagan, several tribes.	On the Okanagan and Piscour rivers	.	.	.	.	300
Kullus-Palus, several tribes.	On the Flathead or Clarke river	.	.	.	.	300
Kootoonais, several tribes.	On M'Gillivray's river, the Flat Bow Lake, &c.	.	.	.	.	450
	Total	33,956	35,182	1,584	5,146	86,947

Recapitulation.—Males, 33,956; females, 35,182; children, 1,584, of both sexes, under 12 years of age; slaves, 5,146. Total, 75,868, of whom an accurate census has been made: 11,079, estimate of tribes, of whom no census has been taken; showing a grand total of

86,947 Indian population, from latitude 42° to latitude 54° N.

"The Indians of Puget's Sound and the Straits of De Fuca, also those farther to the north, appear to be more numerous than those of the interior, and cultivate large quantities of potatoes, &c. for their own

use, and to barter with the vessels frequenting the coast. They are not so cleanly as the Indians of the prairies, nor are they so brave or warlike. Many of the latter tribes are a very fine race of men, and possess large herds of cattle and immense numbers of horses. In the neighbourhood of Walla-Walla, individual Indians were pointed out to us who owned more than 1,000 horses. Slavery is common with all the tribes; and he who possesses most slaves and the largest number of horses, is considered the greatest chief. The Indians of the north are sometimes troublesome; but those of the Columbia are a quiet, inoffensive, but very superstitious race. To this last cause may be traced their quarrels with the white man and with one another. They are well armed with rifles, muskets, &c., but, from policy, they are much stinted by the Hudson's Bay Company in ammunition. The Indian tribes do not remain upon the same ground during the whole year. In the summer they resort to the principal rivers and the sea coast, where they take and lay by large quantities of salmon, &c. for their winter consumption, retiring to the smaller rivers of the interior during the cold season. Neither the Roman catholic nor Methodist missionaries have done much towards reclaiming the Indian population, who are an idle, dissolute race, and very few of them can be induced to change their mode of life, or cultivate more than will absolutely keep them from starvation. The total abolition of the sale of intoxicating liquors has done much for the good of the whole community, white population as well as Indian; and so long as this abstinence (which can hardly be called voluntary) continues, the country will prosper. When this prohibition is withdrawn, and the intercourse with the world open, such is the character of the dissolute and only partially reformed American and Canadian settlers, that every evil must be anticipated, and the unfortunate Indian will be the first to suffer."

The Esquimaux occupy the country bordering on the Arctic Seas, Hudson's Bay and Strait, and the Labrador coast. The Indians roam over the country, in summer following the buffalo, deer, and other wild animals into the districts occupied by the Esquimaux, with whom they are generally in a state of hostility; and as the winter advances, they return towards the more southern regions. A district termed the Saskatchewan, east of the Rocky Mountains, as large as England, contains only 16,730 Indians and Half-breeds, viz.: Crees, 3,500; Assiniboines, 4,060; Blackfeet, 2,100; Piegans, 2,450; Blood Indians, 1,750; Sarcees, 350; Gros-Ventres, 2,100; Sauteaux, 140; Half-breeds (a race whose fathers were Europeans, and mothers Indians), 280.

The following is a classification and distribution of the tribes occupying the country east of the Rocky mountains, and resorting upon occasion to the company's establishments:—

Mackenzie's River District.—The Copper Indians, inhabiting the country about this river; the Loucheux, or Quarrellers; the Hare Indians; the Dog-

rib Indians; the Strong-bow Indians, inhabiting Mackenzie's River district, and speaking different languages.

Athabasca and Isle à la Crosse Districts.—The Chipewyans, and a few of the Cree tribe; inhabiting the country surrounding this lake, and between it and the Isle à la Crosse district.

Peace River District.—The Beaver Indians, and a few Sauteaux from the Rainy Lake, inhabiting both sides of this river, and speaking a language different from that of the Chipewyans of Athabasca.

Upper part of the Saskatchewan District.—The Blackfeet Proper: the Blood Indians; the Piegans; the Fall Indians; the Sarcees. All these tribes are generally termed Blackfeet, although they speak different languages, and have different customs and manners.

Lower part of the Saskatchewan District.—The Stone Indians, or Assiniboines; the Crees; the Sauteux, or Ojibways. These three tribes are constantly at variance with the Blackfeet, and the whole eight depend on the chase for subsistence. They, i. e. the three tribes, extend their habitations also to the upper part of Red River and of Swan River.

York Factory, Oxford, Norway House, Cumberland, and lower part of Swan River District.—Mis-kee-Goose, or Swampy Indians. These also extend along the sea-coast to James's Bay. They evidently spring from the Crees, as their language is only a dialect of the Cree. There is said to be a mixture of the Sauteux in their origin.

Churchill District.—Esquimaux; Chipewyans, and a few Swamp Indians, inhabiting the country to the north of Churchill.

The Indians in James's Bay are generally classed with the Mis-kee-goose, and inhabit the countries about Albany, Moose, and East Main.

Character of the Indian Population.—It is difficult to describe the character of the various tribes referred to in the preceding classifications; they have each some recognised difference, and are most of them in a constant state of warfare with each other. The Sarcees are said to be the boldest. All have horses and fire-arms; and horse-stealing is a favourite occupation with them. The Crees and Blackfeet have deadly feuds, and each combat with the Assiniboines. The small tribes are drawn into the contests of the larger, and are rarely at peace. Ambuscades, surprises by day or night, and treacherous massacres of the old and young, of women and the sick, constitute the moving interests of their lives. No hardships or inducements will make them settle and cultivate their land; and until they do so, it is almost hopeless to expect any Christian results from the humane efforts of the Hudson's Bay Company and the missionaries. The most degrading superstitions prevail; cunning is employed where force cannot be used in plunder; lying is systematic; woman is treated as a slave; and the wild Indian is, in many respects, more savage than the animals around him.

Christian Conduct and Beneficent Policy of the Hudson's Bay Company.—A careful examination of all available information, confirms me in believing, that the Hudson's Bay Company have well fulfilled the objects for which their charter was granted in 1670. Without any aid from the crown—without any drain upon the national exchequer—opposed by American, and even English rivalry—subject to plunder and devastation by the fleets and forces of the French and Russian governments—struggling against an inclement climate, in a sterile soil—shut out from maritime communication with England, except for a few months in the year—and amidst hosts of wild, warlike, and treacherous savages, the Hudson's Bay Company have acquired and maintained for England, by a sagacious and prudent policy, by honourable, and, above all, by Christian conduct, exclusive dominion over that portion of the North American continent which lies between the Atlantic and Pacific Oceans, north of the 49th degree of latitude, extending over more than *three* million square miles—(3,060,000.)

But for the Hudson's Bay Company, England would probably have been shut out from the Pacific, for, on the 5th of April, 1814, a convention was signed between the United States and Russia, (to which England was no party,) making the 54th parallel the boundary of their respective dominions. The settlements of the Hudson's Bay Company on the Columbia River and in the Oregon region defeated this project.

The American geographer and librarian to the United States' government, Mr. Greenhow, who ably vindicates the rights and claims of his own country, who is by no means favourably disposed to any claims of England on the continent of America, and who, as an American, is little inclined to approve of the conduct of an association whose interests he naturally considers opposed to those of his own countrymen, thus candidly expresses his views in 1844, when referring to the disputed territory of the Oregon, Columbia River, Vancouver's Island, &c.:—

"The British Ministers could have no counsellors better qualified to advise, or whose interests were more completely identified with those of the government, than the Hudson's Bay Company, who, representing in all respects the interests of Great Britain in North-West America, has indeed become a powerful body. The field of its operation was more than doubled by its union with the north-west company, and by the licence to trade, in exclusion of all other

British subjects, in the countries west of the Rocky Mountains, where the fur-bearing animals are more abundant than in any other part of the world; while the extension of the jurisdiction of the Canada courts over the whole division of the continent, to which its charters apply, and the appointment of its own agents as magistrates in those regions, gave all that could have been desired for the enforcement of its regulations. The arrangement made with the Russian-American Company, through the intervention of the two governments, secured to the Hudson's Bay Company the most advantageous limits in the north-west; and the position assumed by Great Britain, in the discussions with the United States respecting Oregon, were calculated to increase the confidence of the body in the strength of its tenure of that country, and to encourage greater efforts on its part to assure that tenure.

"The licence granted to the Hudson's Bay Company in 1821, expired in 1842, but another had been previously conceded, also for twenty-one years, containing some new and important provisions. Thus, the company was bound, under heavy penalties, to enforce the due execution of all criminal processes by the officers and other persons, legally empowered in all its territories; and to make and submit to the government such rules and regulations for the management of the trade with the Indians as should be effectual to prevent the sale and distribution of spirituous liquors among them, and to promote their moral and religious improvement. It is, moreover, declared in the grant, that nothing therein contained should authorise the company to claim the right of trade in any part of America, to the prejudice or exclusion of the people of '*any foreign states*,' who may be entitled to trade there, in virtue of conventions between such states and Great Britain; and the government reserves to itself the right to establish within the territories included in the grant any colony or province, to annex any part of those territories to any existing colony or province, and to apply to such portion any form of civil government which might be deemed proper. Whether this last provision was introduced with some special and immediate object, or with a view to future contingencies, no means have as yet been afforded for determining. It is, however, certain that the British government insisted strongly on retaining the above-named privileges; and it is most probable, the Red River* and the Columbia countries were in view at that time as the remainder of the territory, included in the grant and not possessed by the company in virtue of the charter of 1669, is of little value in any way. In addition to the assistance and protection thus received from the British government, the constitution of the Hudson's Bay Company is such as to secure the utmost degree of knowledge and prudence in its councils, and of readiness and exactness in the execution of its orders. Its affairs are superintended by a governor, a deputy-governor, and a committee of directors established at London, by whom all general orders and regulations are devised and issued, and all reports and accounts are examined and controlled. The proceedings of this body are enveloped in profound secrecy, and the communications made to the government in writing, which are likely to be published, are expressed in terms of studied caution, and afford only the details absolutely required.

* Mr. Greenhow is wrong so far as the Red River territory is concerned, as that region is not included in the exclusive licence of trade in 1838.—[R. M. M.]

"The trade in America is especially directed by a resident governor, who occasionally visits and inspects all the principal posts;—under him, as officers, are chief factors, chief traders, and clerks, for the most part natives of North Britain, and an army of regular servants, employed as hunters, traders, voyageurs, &c., nearly all of them Canadians, or half-breeds. The number of all these persons is small, when compared with the duties they have to perform; but the manner in which they are admitted into the service, and the training to which they are subjected, are such as to render their efficiency and their devotion to the general interests as great as possible. The strictest discipline, regularity, and economy, are enforced in every part of the company's territories; and the magistrates appointed under the Act of Parliament for the preservation of tranquillity, are seldom called to exercise their functions, except in the settlement of trifling disputes.

"In the treatment of the aborigines of the countries under its control, the Hudson's Bay Company appears to have admirably reconciled policy with humanity. The prohibition to supply those people with ardent spirits, appears to be rigidly enforced. Schools for the instruction of the native children are established at all the principal trading posts, each of which also contains a hospital for sick Indians, and offers employment for those who are disposed to work, whilst hunting cannot be carried on. Missionaries of various sects are encouraged to endeavour to convert them to christianity, and to induce them to adopt the usages of civilized life, so far as may be consistent with the nature of the labours required for their support; and attempts are made, at great expense, to collect the Indians in villages, on tracts where the climate and soil are most favourable for agriculture. Particular care is extended to the education of the half-breed children, the offspring of the marriage or concubinage of the traders with the Indian women, who are retained and bred as far as possible among the white people, and are employed, whenever they are found capable, in the service of the company. As there are few or no white women in those territories, except in the Red River settlements, it may be readily seen that the half-breeds must in a short time form a large and important portion of the native population.

"The conduct of the Hudson's Bay Company in these respects is certainly worthy of commendation. It is, however, to be observed, that of the whole territory placed under the authority of that body, only a few small portions are capable of being rendered productive by agriculture. From the remainder nothing of value can be obtained, excepting furs, and those articles can be procured in greater quantities, and at less cost, by the labour of the Indians, than by any other means.

"The course observed by the Hudson's Bay Company towards American citizens in the territory west of the Rocky Mountains, has been equally unexceptionable and yet equally politic. All the missionaries and emigrants from the United States, and, indeed, all strangers from whatever countries they might come, were received at the establishments of the company on the Columbia with the utmost kindness and hospitality, and they were aided in the prosecution of their objects, so far and so long as those objects were not commercial. But no sooner did any one, unconnected with the company, attempt to hunt, or to trap, or to trade with the natives, than all the force of the body was immediately directed towards him. There

is no evidence, or well-founded suspicion, that the Hudson's Bay agents have ever resorted, directly or indirectly, to violence, in order to defeat the efforts of such rivals. And, indeed, those means would have been superfluous, whilst the company enjoys such great advantages in its organization, its wealth, and the minute knowledge of the country, and influence over the natives, possessed by its agents. Wherever an American trading post has been established, or an American party has been engaged in trade on the Columbia, there appeared a Hudson's Bay agent at the head of a number of hunters, or with a large stock of merchandise, or a large amount of specie in hand, which were offered for skins on terms much more favourable to the Indians than those possessed by the citizens of the United States; and the latter, in consequence, finding their labours vain, were soon obliged to retire from the field. Even without employing such extraordinary and expensive means, the British traders, receiving their goods in the Columbia by sea from London, free from duty, can always undersell the Americans, who must transport their merchandise 2,000 miles over and from the frontiers of the United States, where the articles best adapted for the trade have previously been subjected to an import duty. In pursuance of the same system, the company endeavours, and generally with success, to prevent the vessels of the United States from obtaining cargoes on the north-west coasts of America, though the mariners of all nations, when thrown upon the coasts by shipwreck, or by other misfortunes, have uniformly received shelter and protection at its posts and factories."—*History of Oregon and California*, published by Murray, London. 1844.

The grounds on which the exclusive licence of trade was granted in 1838, are stated by the Board of Trade (letter, 2nd June, 1837,) to be on account of the liberal and enlightened policy which has generally distinguished the Hudson's Bay Company; and the "peculiar nature of the fur trade seems to justify, and even to recommend, the adoption of the principle of conferring exclusive privileges upon a great body engaged in it, however objectionable such a principle appears with reference to commercial affairs generally."

The Bishop of Montreal, on his visit to the Red River settlement in 1844, says, that the arrangements for his doing so were all made for him "in the most excellent manner, and with the most careful attention, by direction of Sir G. Simpson, the governor of the Hudson's Bay territories." The bishop speaks of "the kindness and attention which he everywhere experienced at the hands of the Hudson's Bay Company's servants." At page 166 of his journal, he says, "It is the rule of the company's posts that the factor or trader in charge, where there is no clergyman, should read the church service on Sundays to the persons who can be gathered to hear it. The company have forwarded the erection of churches at Red River." And at page 164, his lordship remarks—"If

I may judge from the kindness shown personally to myself, the facilities given to my operations, and the respect paid to my office by *all* the gentlemen representing the company's interest with whom I had to do, that body must be presumed well affected to the cause; and that its several proceedings are conducted on a liberal scale, I have some occasion to notice." The late Mr. Leith, who was a resident factor of the company, bequeathed £10,000 toward the propagation of the gospel in the scene of his former pursuits.

A branch of the Church Missionary Society was established at Red River settlement in 1822, under the Rev. Mr. West, who was appointed chaplain to the company. In 1824, the Rev. Mr. Jones was appointed chaplain to the company, and the Bishop of Montreal says, "he met with much countenance and support from the authorities of the Hudson's Bay Company," who, in 1834, "gave a munificent grant towards the construction of another Protestant church." The building was opened for divine service on the 26th of November, 1834. It is capable of accommodating, comfortably, 700 people, and 1,000 might find room without being overcrowded. Five day-schools, containing about 400 children, had been established; besides 2 seminaries, affording board, lodging, and education to 25 young ladies, and 30 young gentlemen, children of the gentlemen engaged in the service of the Hudson's Bay Company. At the different Sunday-schools, also, nearly 300 received religious instruction. The orderly demeanour, moral conduct, and religious habits of all classes, were satisfactory and cheering.

Commodore Wilkes, speaking of Fort Vancouver, on the Columbia river, says—

"There are extensive kitchens and apartments for the half-breed and Indian children that the company have taken to bring up and educate. Of these, there are now 23 boys and 15 girls, who claim the particular attention of Dr. McLaughlin and Mrs. Douglas. A teacher is employed for the boys, who superintends them not only in school, but in the field and garden. During my stay, an examination took place, and although the pupils did not prove very expert at their reading and writing, yet we had sufficient evidence that they had made some improvement, and were in a fair way to acquire the rudiments. Some allowance was to be made for the boys, who had been constantly in the field under their teacher for a few months past. Dr. McLaughlin estimated the labour of four of these small boys as equal to that of a man. It was an interesting sight, to see these poor little cast-away fellows, of all shades of colour, from the pure Indian to that of the white, thus snatched away from the vices and idleness of the savage. They all speak both English and French; they are also instructed in religious exercises, in which I thought

they appeared more proficient than in their other studies. These they are instructed in on Sunday, on which day they attend divine worship twice. They were a ruddy set of boys, and when at work had a busy appearance: they had planted and raised 600 bushels of potatoes, and, from what Dr. McLaughlin said to me, fully maintain themselves. The girls are equally well cared for, and taught by a female, with whom they live and work."

The commodore bears "testimony that the officers of the company are exerting themselves to check vice, and encourage morality and religion, in a very marked manner." He adds, "I saw no instance in which vice was tolerated in any degree. I have, indeed, reason to believe, from the discipline and the example of the superiors, that the whole establishment is a pattern of good order and correct deportment. This remark not only extends to this establishment, but as far as our opportunities went, (and all but two of the posts were visited,) the same good order prevails throughout the country. Wherever the operations of the company extend, they have opened the way to future emigration, provided the means necessary for the success of emigrants, and rendered its peaceful occupation an easy and cheap task."

Lieutenant-colonel Crofton, who recently commanded a detachment of Her Majesty's troops in the Hudson's Bay territories, and was appointed a commissioner of inquiry into the truth of allegations made against the company, thus reports in a letter to the Secretary of State, on 12th February, 1848: "I unhesitatingly assert, that the government of the Hudson's Bay Company is mild and protective, and admirably adapted, in my opinion, for the state of society existing in Prince Rupert's Land, where Indians, half-breeds, and Europeans are happily governed, and live protected by laws which I know were mercifully and impartially administered by Mr. Thom, the recorder, and by the magistrates of the land."

The present governor-general of Canada, the Earl of Elgin, one of the most upright and able servants of the crown, and whose judgment is of the highest order, thus expresses himself in a reply to the inquiries of the Secretary of State for the colonies:—"I am bound to state that the result of the inquiries I have made is highly favourable to the company, and has left on my mind the impression, that the authority which they exercise over the vast and inhospitable region subject to their jurisdiction is, on the whole, very advantageous to the Indians."

BOOK VII.—VANCOUVER'S ISLAND.

POSITION, EXTENT, ASPECT, GOVERNMENT, &c.

THIS fine island is situated on the W. coast of America, between $48^{\circ} 17'$ and $50^{\circ} 55'$ N. lat., and $123^{\circ} 10'$ and $128^{\circ} 30'$ W. long., and is in length about 290 miles, with an average breadth of 55 miles. We know little of the interior of the country: it is said to be intersected by high mountain ranges, with extensive prairies, a rich soil, abundantly timbered with oak, pine, &c., and well watered, adapted for the cultivation of wheat and other grain, with a fine climate, and many excellent harbours. The shores of the island are generally high, steep, rocky, and covered with wood. Fort Victoria, the chief establishment, in $48^{\circ} 26'$ N. lat., and $123^{\circ} 9'$ W. long., is on the south shore, near the head of a narrow inlet, termed the Port of Camosack, or Cammusan, around which there is a range of plains to an extent of nearly six square miles, containing valuable tillage and pasture land, and water power for flour or saw mills. The fort is a square enclosure of 100 yards, surrounded by cedar pickets, 20 feet in height, having octagonal bastions, containing each six 6-pounder guns at the N.E. and S.W. angles. The buildings are made of square timber, forming three sides of an oblong. About three miles distant, and nearly connected by a small inlet, is the harbour of Esquimaux, which is described to be capable of receiving ships of the line, and of which a very favourable opinion has been expressed by captain George Thomas Gordon, R.N., who was directed by admiral Seymour to examine the coal mines on Vancouver's Island. The coal is found in seams 10 to 18 inches thick, some below high-water mark, others 60 feet above the sea; and Captain Gordon, by the aid of the natives, obtained 60 tons of coal, equal, if taken several feet from the surface, to the best Scotch coal, at an average cost of four shillings per ton. The coal yields coke in the proportion of 52 per cent. The extent of the coal-field inland is supposed to be considerable; and it stretches over all

the N.E. coast. There is excellent anchorage in the neighbourhood, which may be approached by way of Cape Scott, thus avoiding the difficult and dangerous navigation of Sir George Seymour's Narrows and Johnstone's Straits.

The natives, or Indians, on the island, amount probably to 10,000 in number. Captain Gordon says, "They are a fine race of men, and appear industrious and friendly, but are much addicted to thieving." When they ascertained that he wanted coal, they entered into his views, became very active, and surprised him by procuring, with the rude implements of hatchets and wedges, a large quantity of coal.

Vancouver's Island has been granted, by letters patent, dated 13th January, 1849, in free and common soccage, to the Hudson's Bay Company, under certain conditions, one of which provides, that unless a settlement of resident colonists, emigrants from the United Kingdom, be established within five years, the grant shall be revoked. The ports and harbours are free to all nations, either trading or seeking shelter therein: the fisheries around the island are open to every freeholder: all minerals found belong to the company, who have the right of digging for the same, compensation being made to the owner of the soil for any injury done to the surface; but the owners of land have the privilege of working, for their own benefit, any coal mine that may be on his land, on payment of a royalty of 2s. 6d. per ton. The Hudson's Bay Company sell the land, in free and common soccage, in lots of not less than 20 acres, at £1 per acre. Purchasers of more than 20 acres are bound to take out with them, to Vancouver's Island, 5 single men, or 3 married couples for every 100 acres. The island is to be divided, where practicable, into districts of from 5 to 10 square miles. A portion, equal to one-eighth of the quantity of land sold, is to be set apart for the main-

tenance of ministers of religion. Thus, in a district of 10 square miles, containing 6,400 acres, supposing 5,120 acres sold, the minister would be entitled to 640 acres, the remaining 640 acres would be available for roads, site for church and churchyard, schools, or other public purposes.

With the view of enabling the ministers to bring their lands into cultivation, a free passage to be granted to such a number of persons as a settler having an equal quantity of land would be required to take out, the cost to be paid out of the fund held in trust for the benefit of the colony. The several apportionments for purposes of religion to be conveyed to, and to be held by, the governor and council, in trust for the parties appointed to perform the clerical duties of the respective districts.

The most material provisions for the government of the colony are as follows:—The governor is appointed by the crown, with a council of seven members, likewise so appointed. He is authorised to call assemblies, to be elected by the inhabitants holding 20 acres of freehold land. For this purpose, it is left to the discretion of the governor to fix the number of representatives, and to divide the island into electoral districts if he shall think such division necessary. The governor will have the usual powers of proroguing or dissolving such assembly. Laws will be passed by the governor, council, and assembly. The legislature, thus constituted, will have full power to impose taxes and to regulate the affairs of the island, and to modify its institutions, subject to the usual control of the crown.

The position, resources, and climate of Vancouver's Island eminently adapt it for being the Britain of the Northern Pacific; there is no port between the straits of Juan de Fuca and San Francisco: it is within a week's sail of California; within double that distance from the Sandwich Islands, with which a thriving trade has already been established; five days' voyage from Sitka or New Archangel, the head-quarters of the Russian Fur Company's settlements, where large supplies of provision are required; and it is within three weeks' steaming distance of Japan, with whose rich islands it is to be hoped the British government will soon be enabled to re-establish the friendly commercial intercourse that existed at the beginning of the seventeenth century. This commanding position justifies the expectation that Vancouver's Island will become not only a

valuable agricultural settlement, but also a rich commercial *entrepôt* for British trade and industry.

The formation of a canal and of a railroad across the Isthmus of Panama will materially facilitate the colonization of Vancouver's Island. Whether it be possible to establish regular and rapid communication, *via* Canada, with the coast of the Pacific, remains yet to be ascertained; but great credit is due to Major Robert Carmichael Smyth, for the talent, energy, and patriotism with which he has laboured to promote a "British colonial railway communication between the Atlantic and the Pacific." By whatever means Vancouver's Island be brought within half its present distance from England, great good cannot fail to accrue to the colony and to the parent state.

Steam communication between England and British America.—Mr. Samuel Cunard, of Halifax, Nova Scotia, having entered into a contract with the British government for the conveyance of the mails between Great Britain and North America, the British and North American Royal Mail Steam-packet Company was originated, and an amended contract entered into with the government by Mr. Cunard, Mr. George Burns, of Glasgow, and Mr. David Mac Iver, of Liverpool, in 1839, to carry the mails twice a month, during eight months in summer, and once a month during four months in winter, between Liverpool and Halifax, in Nova Scotia, and Boston in the United States and Quebec, by a branch steamer on the St. Lawrence. Previously to the commencement of the service under this contract, in July, 1840, there were other steamers, *viz.*—the *Sirius*, *Great Western*, *British Queen*, *President*, *Royal William*, and *Liverpool*, some of which had crossed the Atlantic with more or less success, but only in the summer; and the capability of steamers to traverse the North Atlantic with regularity in winter, as well as summer, remained to be proved. Indeed, from the experience acquired by the voyages of the before-named vessels, it was generally held to be impracticable for steamers to navigate that ocean during the winter months, not in point of regularity alone, but of safety. The result of the winter passages of this company's vessels was highly satisfactory; and the government, with a view to the public benefit, entered into an extension of the contract, commencing 1st January, 1848,

with Messrs. Samuel Cunard, George Burns, and Charles Mac Iver (vice Mr. David Mac Iver, deceased,) for an increased service. A steam ship of the first class now sails from Liverpool to Boston and New York alternately every second Saturday during the months of December, January, February, and March, and to the same ports alternately on every Saturday during the other eight months of the year. The experience of the past nine years has amply proved, that with such steamers as are employed by this company, and under proper management, the North Atlantic Ocean may be navigated at all seasons of the year with speed, regularity, and safety. Previous to the commencement of the service by this company, the mails were carried between Falmouth and Halifax by gun brigs, which cost the country a great deal of money, as well as loss of lives annually. *The contract price paid by the government for the present line of steamers has been met by the postages, and an immensely better mode of conveyance has been obtained, at a great saving of expense to the country, and without loss of life to a single passenger.* The contractors were only originally bound to furnish vessels of 300 horse power, but they supplied vessels of 1,200 tons burthen, and upwards of 400 horse power. On the extension of their contract they were bound to supply vessels of 400 horse power, but they are now employing vessels of 700 horse power, and are building still larger ones to be propelled by engines of 800 horse power. The burthen of the new vessels will be about 2,000 tons.

The contract payment for the first service described above, was £90,000 until the Quebec branch was dropt, when it was reduced to £85,000. The present payment for the extended service is £145,000 per annum, for which nine ocean steamers are kept.

It may here not be out of place to mention, that in consequence of the repeal of the British Navigation laws, it has been announced by the secretary of the United States Treasury, that from and after the 1st of January, 1850, British ships and their cargoes will be admitted into the ports of the United States, on the same terms as to duties, imports, and charges, as vessels of the United States and their cargoes. In consequence of this change, the British and North American Royal Mail Steam Packet Company have originated a branch line of Steamers, to convey French goods from Havre, to their steamers at Liverpool, to be

taken on from thence to Boston and New York.

Great credit and liberal national support are due to the enterprising and successful establishers of this important line of communication between the old and the new world; they have, in fact, bridged over the wide Atlantic; made the trackless and tempestuous deep a safe highway the whole year through; and most materially contributed to the promotion of friendly intercourse, of social improvement, and of commercial and financial relations between Europe and America. To the British Colonies on, and adjacent to, the western continent, the advantages of weekly intercourse with the parent and governing state are manifold, and of incalculable value; but for the "Cunard" Line of steamers, (which arrive at their respective stations with more regularity than the London and York mail coach did twenty years ago) the maintenance of the North American provinces as an integral part of the British Empire, would have been a matter of great difficulty; and although the United States government is now endeavouring to establish a distinct line of mail steamers from New York to Bremen, I doubt not that the superiority will continue, as heretofore, with the British line, and that it will deserve the cordial and effective support of Her Majesty's government.

Connected with an efficient transatlantic communication is the establishment of a railroad on the seaboard of British America, which shall connect the whole of the North American provinces, and form a continuous steam transit from the sea-coast to Lake Huron; one line has been projected from Halifax, *via* New Brunswick to Quebec, to which I have referred in the details of Nova Scotia: another line is now actually in progress, termed the *St. Andrew's and Quebec Railroad*, and is an undertaking carried on under the auspices of the Earl Fitzwilliam, Lord Ashburton, and other gentlemen in England, combined with the principal merchants and inhabitants resident at St. Andrew's and other points through which the line proceeds. The line will afford, at all seasons of the year, a direct and uninterrupted communication between the Canadas and Atlantic, and will be the only one the colonists will possess through British territory.

Its political importance can therefore be scarcely overrated, when viewed either as a high road to the mother country, or as con-

necting the different provinces in a common bond of communication; and, in a mercantile point of view, it cannot be considered otherwise than as one of the best investments of the day, having been stamped with the patronage and approval of the late Lord Ashburton, even before the company received their recent magnificent grant of land; Lord Ashburton's acquaintance with the country, from his settlement of the boundary dispute, renders his testimony of great value. The grant consists of all the unallotted lands comprised within a belt of five miles on each side of the railway, and, by a certificate from the surveyor-general, contains upwards of 200,000 acres of some of the best land in the province, which, in consequence, doubles, or even quadruples the profitable character of the undertaking.

The company is incorporated by several acts of the local legislature, confirmed by the queen in council, and in addition to the above grant of land, has obtained privileges and advantages which cannot be claimed by any similar body, viz., 6 per cent. on the English capital guaranteed by the legislature for 25 years, which is chargeable on the revenues of the province. The Company have the power to make branch lines or extensions to, or in any part of the colony without applying for fresh legislative acts, and with the same facilities as to land and the free use of crown materials as on the trunk line.

It is officially stated to me that the capital of the Association is divided into 8,000 shares of £20 each: half of which, termed class "A" are to be allotted in England, and the remainder, called class "B" reserved for allocation in New Brunswick; the majority of these shares are already appropriated, and the works are proceeding with vigour, and it is confidently hoped that the first section to Woodstock, (80 miles) will be open in two years. Offices for the payment of dividends and the transaction of such business as must be conducted in England, are established at No. 10, Parliament Street, Westminster; and the interests of the English stockholders are guarded by a board of directors, resident in this country, whose sanction is necessary to all measures proposed by the local directors in New Brunswick. The land belonging to the company, which has hitherto been of comparatively trifling value, will, when the railway passes through it, most probably

be eagerly sought after, and at once command a considerably enhanced price, which will far more than bring back their whole capital to the shareholders; as, for instance, there are 8,000 shares of £20 each, and if the 200,000 acres are divided amongst those 8,000 shares, it will give 25 acres per share, which, taken at the low figure of £1 per acre, gives £25 per share, or £5 per share more than the actual capital subscribed; and although the land will be disposed of, and thus return their capital to the shareholders, yet still the line will remain their property, and, from the provincial guarantee of interest, retain a comparative high value in the market.

This is a strong inducement offered to the English capitalist, the use of whose money will only in the first instance be required, but to the homeless wanderer from the British shores, its benefits will prove incomparably greater, as employment will be afforded him on the railway until he has had time to clear his land and become acquainted with the requirements of his novel mode of life; and by this he will be spared that fearful season of suspense which now intervenes between the first clearing of the land and the period when it yields its return.

Some of the shareholders have agreed to give a tenth of their land for church, school, and hospital purposes. Thus will nuclei be formed, around which a population will collect in a healthy and legitimate manner, and blessings, both present and prospective, be secured to all future emigrants.

Table of the portions of time in which European intelligence, telegraph and mails, passengers and freight, by sea and railroad, may reach Montreal. By Admiral W. F. W. Owen.

For Montreal.	Intelligence by telegraph will be delayed by intervening time at sea	Mails, passengers, and freight, by sea and railroad.
	Hours.	Hours.
Debarking at—		Sea. Rail.
Cansau or Whitehaven	0	0 + 25 = 25
Halifax, Nova Scotia . .	12	12 + 24 = 36
Portland, Maine	48	48 + 0 = 57
Boston, Massachusetts . .	52	56 + 11 = 63
New York	70	70 + 13 = 83

If space had permitted, a chapter would have been given on emigration to the British North American colonies; on the advantages they possess as integral portions of a vast empire; and on the general state of those provinces as fields for the reception of the accumulating labouring population of the United Kingdom. This section must, however, be reserved for the close of the work.

AUSTRAL-ASIA.

BOOK I.—AUSTRALIA, OR NEW HOLLAND.

CHAPTER I.

DISCOVERY, MARITIME SURVEYS, COAST LINE, INTERIOR EXPLORATION, WINDS, CLIMATE, AND GEOLOGY.

THE British possessions in Austral-Asia are Australia, or New Holland (which contains the several colonies of New South Wales, Port Phillip or Victoria, South Australia, and Western Australia, or Swan River), Van Diemen's island, New Zealand, the Chatham, Auckland, and other lesser islands—the whole comprising a territorial area in the Southern hemisphere nearly as large as Europe.

These extensive regions form an important and most interesting portion of our Colonial Empire, whether viewed in relation to their origin or progress, to their existing or prospective state.

In a favourable position, situated midway between America and Africa, and at the extremity of Asia, they are valuable in a political sense for the increasing capabilities they afford towards the maintenance of British power in the East—and in a commercial sense from their contiguity to the richest and most densely peopled portion of the globe: possessing in themselves (apart from these considerations) a fertile soil and a salubrious clime, they are well adapted for the dwelling of millions of the Anglo-Saxon race,—and even in this early stage of their existence, with many of their resources yet undeveloped, they are outlying farms, already instrumental in supplying England with augmenting quantities of grain, meat, wool, tallow, flax, timber, and other raw products, in exchange for her manufactures.

The insulated continent of Australia, remarkable for its great extent, singular conformation, and recent discovery, first claims attention. Less than a century ago the mere coast line of this "great south land" was an unsolved geographical problem, as its interior is at the present moment; in the

eyes of the learned its very existence was a phenomenon, and some idea may be formed of the strange surmises entertained on the subject, from the wild hypothesis of Blumenbach, that Australia must originally have been a comet or planetary body, which being drawn within the sphere of attraction, fell upon this globe. Even those skilful navigators, and scientific explorers, who have surveyed its coast-line, and, to a limited extent, penetrated the interior, appear unable to arrive at any satisfactory conclusion concerning the operating cause, or the probable epoch of the formation of this vast country—whether it has been in a comparatively modern age left dry by the receding waters of the ocean, or extruded from the bowels of the earth by subterranean fires.

But the interest excited by this question throughout Europe, or by the singular animal and vegetable products of a land of contraries, merges into insignificance compared with that created by the extraordinary progress of British colonization at a distance of 15,000 miles from the parent state. The earliest settlement is within the recollection of the present generation. Conceived in a benevolent spirit, it was commenced in 1787 by the despatch to Botany Bay of a fleet laden with the refuse of our gaols and penitentiaries. For several years the convicts were repeatedly on the eve of perishing by famine, but stimulated by the hope of regaining their forfeited freedom, directed by the intelligence of their superintendents, and governed by a systematic and humane policy, these outcasts hewed down the forests, subdued the stubborn soil, and earned for themselves a home where "their sins were covered and their iniquity remembered no more."

These pioneers in the wilderness prepared the way, and smoothed the difficulties for their fellow-countrymen whom no crime had expatriated, but who sought at the antipodes the means of obtaining an honourable livelihood under the protection of the flag of their country, in the full enjoyment of the language, laws, and customs of their fatherland. The result of their joint labours is now manifest in the prosperous colony of New South Wales—the proudest monument of British civilization in the nineteenth century.

This success encouraged the settlement at Hobart Town, Van Diemen's Island, in 1801-2; at Swan River, Western Australia, in 1829-30; of Adelaide, South Australia, in 1835-6; of Melbourne, Port Phillip, in 1836; and of Auckland and Wellington, New Zealand, in 1840.

The progress of these Austral-Asian settlements is without a parallel in history, and their condition demands minute and impartial investigation on behalf of the owners of property in those colonies, and of the yet more numerous class of intending emigrants to whom every detail must be important, as a means of enabling them to decide on the locality best calculated to suit their peculiar circumstances.

Having no theory to uphold—no private views to promote—no particular colony to serve, I shall endeavour in this, as in other portions of my work, to lay before the public the fullest amount of information contained in the official documents to which her Majesty's government has granted me access; and, guided by the knowledge personally acquired in Australia, collate from the varied, heterogeneous, and scattered materials furnished by the most trustworthy authorities, every useful or interesting fact which may contribute to the general good, and illustrate the power and resources of the British empire.

Australia, or New Holland, the largest island in the world, lies between the parallels of $10^{\circ} 45'$ and $38^{\circ} 45'$ S., and the meridians of $112^{\circ} 20'$ and $153^{\circ} 30'$ E. of Greenwich. It is separated on the north from the islands of New Guinea and the Moluccas by Torres Strait, and from Timor and other islands in the Eastern Archipelago by the Arafura sea; on the south, from Van Diemen's Island, or Tasmania, by Bass' Strait: its eastern and southern shores are washed by the Pacific, its western and north-western by the Indian Ocean. The latitudinal dif-

ference between Cape York and Wilson's Promontory, the northern and southern extremities, is twenty-eight degrees, equal to 1,680 geographical miles; the greatest distance from east to west is 2,227 geographical miles. The area is estimated at 2,690,810 square miles, and the coast line at nearly 8,000 nautical miles.

The distances and bearings of the several points around the coast are stated to be as follows:—

	Miles.
Wilson's Promontory to Cape Howe, N.E.	260
Cape Howe to Breaksea Spit, N. a little E.	950
Breaksea Spit to Cape York, N.W.	1,150
Cape York to Cape Van Diemen, W.	900
Cape Van Diemen to North-West Cape, S.W.	1,300
North-West Cape to Cape Leeuwin, S.	900
Cape Leeuwin to Great Australian Bight, E. a little N.	1,200
Great Australian Bight to Wilson's Promontory, S.E.	1,100

Circumference in round numbers 7,750

The proportion which Australia bears to the other divisions of the globe has been thus calculated by the distinguished French navigator, Du Freycinet:—

Divisions.	French Leagues.	Proportion.
Asia	2,200,000	17
America	2,100,000	17
Africa	1,560,000	12
Europe	501,875	4
Australia	384,375	3

Viewing Van Diemen's Island as a portion or prolongation of Australia, we may consider it as forming one of the marked tripodal capes or promontories which stretch from Asia, Africa, and America, towards the Antarctic Circle.

Discovery.—To what European or Asiatic nation the existence of Australia was first known, and when or by whom it was discovered, is a matter of great uncertainty, from the vague and often inconsistent statements by which the claims of various navigators are supported. Although we have no positive evidence, there appears much probability that the Chinese were aware of the existence of "a great south land." Abundant records remain to prove, that from a very early period to the thirteenth century, they were a thriving and enterprising people, engaged in an extensive maritime trade. M. de Guignes says, "Nous trouvons dans les annales Chinoises des VII. et VIII. siècles, une route par mer depuis la Chine jusqu'à l'embouchure de l'Euphrate." The Arabian traveller, Ebn Wushab, (A.D. 877,)

points out the route pursued at that time, in the voyage from Bussora to Canton; and Edrisi, writing in 1156, states, that Muscat, on the coast of Arabia, was annually frequented by ships from China. They had also, together with the Hindoos, constant commercial intercourse with Java and the Eastern Archipelago. It may, moreover, be worth noting in this place, that the nutritious trepang, or sea-slug, (*bêche de mer*), which has for ages been a favourite luxury with the Chinese, is found in great abundance on the northern shores of New Holland, which are, even to the present time, annually frequented by a fleet of fishing prows, from being the chief source from whence this singular edible is obtained. It may be urged, that this fact renders it the more unlikely that the Chinese were acquainted with the island, since, as a fishing-station of any value, clear records concerning it would be extant; but, on the other hand, we must not only remember the very slight knowledge we possess of the annals and charts of the Chinese, but also the serious injury, and indeed the almost total destruction of their maritime traffic by the piratical depredations of the Portuguese, Spaniards, and Dutch, who, in many instances, buried in oblivion important geographical information from the most selfish motives. On the island of Timor, distant only 250 miles from the coast of Australia, there are many Chinese, but how long they have been established there we have no means of ascertaining.

Among European nations, the earliest claim to the discovery of *Terra Austral* is made by the French, whose pretensions rest upon the assertion of de Brosse and the Abbé Prevost, that Paulmier de Gonneville, a French captain, who sailed from Honfleur in 1503, lost his reckoning, and was drifted into an unknown sea, from which he escaped by observing the flights of birds towards the south, and following them. Gonneville made the land, on which he lived for six months, refitting his vessel, and living on friendly terms with the natives, whom he represents as having made some advances in civilization. These could not have been the Australian savages; they may have been the people of New Zealand or of Madagascar. The distinguished hydrographer, Flinders, one of the best authorities on the subject, considers this claim unfounded, and adds, that the proofs adduced in its support themselves demonstrate, that it was not any part

of Australia, but Madagascar that Gonneville discovered, and from whence he brought a native, called Prince Escomerie, to Normandy. The discovery of a maritime route to the East Indies, *via* the Cape of Good Hope, by Vasco de Gama, under the flag of Portugal, in 1498, and of a passage to Asia, through the straits which separate Cape Horn from Patagonia, by Magellan, or Magalhaens, under the flag of Spain, 27th November, 1520, led to an extended acquaintance with the Eastern seas; and as it is certain that, during the earlier half of the sixteenth century, the Spanish and Portuguese navigators pushed their researches into the South Pacific, it is probable that the claim made by them to the discovery of at least the northern coast of Australia, is not wholly unfounded, though, if made, it was unattended by any practical result.

In 1526, Don Jorge de Menezes, who was appointed to the government of the Moluccas, sailed from Malacca, and spent some months in a port supposed to be in Papua or New Guinea. In the same year, Alvarez de Saavedra sailed from a port in Mexico in search of gold, and discovered Papua, and some of the adjacent islands.

In 1543, Ruy Lopez de Villabolas ranged the New Guinea and other coasts.

In 1567, Alonzo de Mendana sailed from Lima, and discovered the thirty-three islands, which he named Solomon's Islands, "to the end that the Spaniards, supposing them to be those islands from which Solomon fetched gold to adorn the temple, might be the more desirous to go and inhabit them." In his second voyage he could not find the islands: he died seeking them, and was succeeded by Quiros, who abandoned the search when only forty leagues distant from them.

In the British Museum there is a manuscript book of charts, entitled an Hydrographic, compiled by John Rotz in 1542, and dedicated by him to Henry VIII. of England. In one of them is rudely delineated an ill-defined land, situated to the south of Java, and termed *Jave le Grand*, but the chart terminates abruptly, only a portion of the north and north-west coast of this territory being laid down. There is also a large manuscript chart on the Mercator plan in the Museum, numbered in the catalogue 5,413, prepared for the dauphin of France, which Mr. Holmes, who has charge of the chart department, and has paid much attention to the subject, supposes to have been

constructed about the year 1536. In this chart the coast line of the African and American continents, south of the equator, is traced with some degree of accuracy. This document likewise contains part of a country inscribed *Jave le Grand*, on whose shores are depicted men and huts, and immediately adjacent to Cape Horn, to the southward, is what appears to be part of a continent, on which is marked *La Terre Australie*; this would lead us to suppose that the hydrographer, whoever he may have been, was impressed with the belief, which then and long afterwards prevailed, of the existence of a great continent, running north and south from 33° to 64° S. lat., its northern coasts stretching along the South Pacific to an immense distance, and extending at least from the straits of Magellan to New Zealand. Leaving the region of conjecture, we know for a certainty that on the 21st December, 1605, Fernandez de Quiros sailed with three vessels from Callao, in Peru, one of the objects of his expedition being to search for the *Terra Austral*, a continent supposed to occupy a considerable portion of that part of the southern hemisphere lying westward of America. Quiros, after discovering several islands, came to a land which he named *Australia del Espiritu Santo*, supposing it to be a part of the great southern continent. Luis Vaca de Torres, separated from Quiros, coasted along the Louisiade Archipelago, sighted the hills and islands of Cape York in 11° S., and spent two months in surveying the intricate navigation of the strait by which the *Terra Austral* is divided from New Guinea. We know, however, little of his proceedings, or of those of Quiros, as the accounts were transmitted direct to the king of Spain, who kept them from the public, and the existence of the dangerous channel, now called Torres Strait, was generally unknown, until rediscovered and passed by captain Cook in 1770. Fortunately for his reputation in after ages, a copy of a letter of Torres to the king of Spain, dated Manilla, 7th July, 1607, was deposited in the archives of the Spanish settlement at Manilla, where it was found by Mr. Dalrymple (himself an hydrographer), after its capture by the British troops in 1762. The Englishman, with true generosity, gave the name of the enterprising Spaniard to the strait he had discovered.

Torres describes the strait as being filled by "an archipelago of islands without number; the bank shoaler in the eleventh

degree of latitude; the people black, corpulent, naked, armed with lances, arrows, and clubs of stone." This description of the people refers to New Guinea rather than Australia, from the mention made of arrows. Torres adds, "we caught in all this land twenty persons of different nations;" from which it would appear that Torres adopted the policy of Columbus, Cabot, and other early navigators, in seizing on the natives of new found countries, to testify to their respective governments the reality of their voyages.

On the 11th of November, 1605 (the same year in which Quiros and Torres sailed from Peru) the Dutch yacht, named *Duyfhen*, was dispatched from Bantam, the chief seat of government in the Eastern Archipelago, to explore the islands of New Guinea.

The *Duyfhen* sailed along what was thought to be the west shore of that country, to $13^{\circ}45'$ S. lat., but which was in reality the north shore of *Terra Austral*, and then, being in want of provisions, proceeded to Banda, where she arrived in June, 1606, having unconsciously visited the "Great South Land," of which, in 1623, the yachts, *Pera* and *Arnhem* were sent in search from Amboyna. Jans Carstens, the commander of the expedition, with eight of his crew, was murdered on the coast of New Guinea; but the survivors pursued their voyage, and discovered "the great island of Arnhem and the Spult, or Speilt." (What is meant by "the Spult" it is now difficult to understand, but in the old charts a river is marked by that name, which is probably here intended to signify the land in its vicinity.) The *Arnhem* then returned to Amboyna; the *Pera* proceeded along the coast to Cape Keer Weer, (*Turn-again*, supposed by some to be the west coast of New Guinea, by others to be the east coast of the Gulf of Carpentaria,) where the *Duyfhen* had previously been, and explored the coast as far as 17° S. lat. There is, however, much discrepancy in the accounts of this and other early voyages. In the years 1616, 1618, 1619, and 1622, the west coast was noted by several outward-bound vessels, among others by the *Endraght*; and in a manuscript chart, by Eesel Gerrits, dated 1627, the first discovery of it is attributed to Dirk Hartog, commander of the *Endraght*, bound to India (A.D. 1616), who saw the coast in $26^{\circ}30'$ S. lat., and sailed northward to 23° , giving the name of *Landt de Endraght* to the land thus surveyed. An important part of this discovery was the roadstead, called by his

name, at the entrance of a sound lying a little S. of 25°, afterwards named Shark's Bay, by Dampier. Upon one of the islands forming the roadstead, there was found, in 1697, and afterwards, in 1801, half buried in the sand, with the rotten remnant of a post attached to it, a tin platter, bearing an inscription, of which the following (as nearly as it could be deciphered) is a translation:—"Anno 1616, 25th October, arrived here the ship *Endracht*, of Amsterdam, first merchant, Gilles Miebaïs, of Luik, Dirk Hartog, of Amsterdam, captain. They sailed from hence for Bantam, the 27th do., A° 1616." The names of the under merchant and chief mate are illegible. In July, 1618, the *Mauritius*, another outward bound Dutch ship touched at Willem's River, near the North-West Cape, and a year after captain Edel, commanding a Dutch vessel, touched on the coast, and gave his own name to the land from 29° to 26° 30' S. lat. The great reef lying off this land, called *Houtman's Abrolhos*, was discovered at the same time.

The *Leeuwin*, also outward bound, fell in with the coast as far as 35°, and sailed along to the north, giving its name to the Cape, in 34° 19' S. lat., 115° 6' E. long.*

In 1628, the *Vianen*, one of the seven ships which returned to Europe under the command of Carpenter, the Dutch governor-general, from whom the deep gulf on the north coast takes its name, reported having seen the shore, and the circumstance is thus stated in the Dutch records: "the coast was seen again accidentally, and coasted 200 miles without gaining any knowledge of this great country, only observing a foul and barren shore, green fields, and very wild, black, barbarous inhabitants." This part was subsequently called De Witt's Land, but by whom does not appear. In Thevenot's collection of charts, &c., there is an account of the shipwreck of Francisco Pelsart, in the *Batavia*, on the 4th June, 1629, on the Abrolhos. Pelsart proceeded along the north-west coast in a small decked boat, crossed thence to Batavia, and returned with succours for his men; too late, however, for they had been murdered by the savages.

The south coast was accidentally discovered in January, 1627, by the Dutch ship, *Gulde Zeepaard*, outward bound from Hol-

land. It was called Nuyts' Land, from Pieter Nuyts, who is supposed to have commanded the *Zeepaard*, and is said to have traced it for 1,000 miles from Cape Leeuwin, and laid down a number of positions with great accuracy. The Dutch government being anxious to ascertain how far this great south land extended towards the antarctic circle, despatched Captain Abel Jans Tasman from Batavia, with two vessels, on the 14th August, 1642. Tasman, after touching at the Mauritius, steered south and east, and on the 24th November made some high land in 40° S. lat., 163° 50' E. of Teneriffe, which he named in honour of the governor-general, Antony Van Diemen's Land, and sailed along, not supposing it to be an island; he anchored in Storm Bay, then pursuing an east and south course, he discovered part of the west side of New Zealand, (of whose insularity he was also unaware, and considering it to be a part of *Terra Australis*, he named it Staten Land), the Friendly and Prince William Islands. In 1644, Tasman was sent by the Dutch East India Company on a second voyage of discovery, and directed, after passing the land of Arnhem, to "follow the coast further as it may run westward or southward, endeavouring by all means to proceed, that we may be sure whether this land is divided from the *Great Known South Land* or not." From this expression, it is evident that the Dutch had acquired a knowledge of some part of the *Terra Australis*, to which they about this time gave the name of New Holland. Unfortunately no account of this voyage has ever been published, except that contained in a garbled extract from Tasman's journal by Dirk Rembrantz, and translated in 1776, but his track is supposed to be indicated by the names given to different places, namely those of Van Diemen (as in a former instance), two of the council who signed his instructions, and of Maria, the daughter of the governor-general, to whom he was attached.

It is very probable that the Dutch East India Company did not consider that New Holland was in any way useful from its productions, and much feared the character of its inhabitants. Jans Carstens, who commanded the *Pera* and *Arnhem* in 1623, says, "in this discovery we found everywhere shallow water and barren coasts, islands altogether thinly peopled by divers cruel, poor, and brutal natives, and of very little use to the company."

Witsen, in his "Notes," alludes to Tasman's

* The above statements are derived chiefly from the instructions given to Tasman when sent from Batavia on his second voyage of discovery, and signed by the governor-general Antonio Van Diemen, and four members of the council of Batavia.

describing the people on different parts of the coast as "bad and wicked," "shooting arrows," "throwing stones," "living very poorly," "feeding upon roots;" "there are few vegetables, and the people use no houses."

In 1663 Thevenot published his chart of the west coast of the "*Great South Land*."

In 1688 Dampier, the most observant navigator of his age, visited the west coast with the *Buccaneers*, and described it as low and sandy, with scarcely any vegetation on its shores. The *Buccaneers* careened and refitted in about 16° S. lat.

In 1699 Dampier was expressly sent as pilot in H.M.S. *Roebuck*, on a voyage of discovery, and visited the west and north-west coasts.

In Dampier's *New Voyage round the World* published in 1703, a chart of the world therein engraved only shews part of the north-west and south coast of New Holland, which is joined on the east to some land stretching towards the equator, and joining the islands of the Eastern Archipelago. The most southern part of New Holland marked, is in about 32° S. lat., and "*Diemen's Land*" is placed ten degrees further to the southward.

Dampier's track in 1699 was from Sumatra to the north-west coast of New Holland, whence he proceeded to Timor in September 1699; in the chart of his voyage, he lays down the coast as far north as the gulf of Carpentaria, traces part of the coast of New Guinea, but leaves an unexplored tract between that island and Australia, nearly in the position of Torres Straits; in fact direct north from the land we now call Cape York.

In recording his proceedings on the west coast, he states, "I spent about five weeks in ranging off and on the coast of New Holland, a length of about 300 leagues." He subsequently discovered New Britain.

1696.—William de Vlaming was sent in search of a Dutch ship, lost in 1684-5; he visited the west coast, found black swans near Rottenest Island, and named the place *Swan River*. He then sailed north as far as 21° 28'.

In 1710, captain Woodes Rogers was sent to the South Seas, with two vessels; Dampier was pilot; they sailed through what they termed *New Guinea Straits*.

1767.—Captain Carteret sailed through the strait which separates New Britain from New Ireland.

1721.—The Dutch East India Company

fitted out a squadron for discovery, under captain Roggewein, who lost one of his ships on the east confines of Australia. Having landed in New Britain, he was attacked by the natives, and returned without accomplishing any satisfactory results.

The justly celebrated captain Cook, in his exploring and scientific expedition with H.M.S. *Resolution* and *Adventure*, on the 6th of October, 1769, discovered the east side of New Zealand; continued surveying the coast until the 31st of March, 1770, when he proceeded to New Holland, and, to use his own words, "surveyed the east coast of that vast country which had not before been visited, and passed between its northern extremity and New Guinea;" thus demonstrating beyond a doubt the insularity of New Holland.

The first port in Australia which captain Cook entered was *Botany Bay*, in April, 1770; thence he sailed to the northward, and passed *Port Jackson*, which, from its narrow entrance at the "heads," he supposed to be merely a boat harbour, and gave it the name of the sailor then on the lookout at the mast-head. At *Cape Tribulation* on the north-east coast of Australia, the ship of captain Cook struck on a coral reef; he refitted and repaired her in the adjacent *Endeavour Bay*, and then proceeded to solve the doubt of New Holland being separated from New Guinea and the adjacent lands.

Captain Marrion, a French officer, with two ships, skirted the coast in 1772, in search of the supposed southern continent, and proceeded to New Zealand, (which had been rediscovered by captain Cook,) where he was murdered by the natives in the Bay of Islands. In 1768 the French navigator, De Bougainville, visited the Australian coast. In 1791, the south coast was visited by captain George Vancouver, on his way to the north-west coast of America; he made the land on the 26th September, at Cape Chatham, in 35° 3' S. lat. and 116° 35' E. long.; then sailed east along the coast till the 28th, when he anchored in a sound, which he named after George III. Bad weather prevented his doing more than verifying a part of the coast laid down in Nuyt's chart of 1627.

On the 9th March, 1773, captain Tobias Furneaux, second in command in the expedition under captain Cook, in H.M.S. *Adventure*, made the south-west cape of Van Diemen's Island, and steered east, close to the rocks called *Maatsuyker's* by Tasman,

afterwards anchoring in what he took to be Storm Bay, (which he called Adventure Bay), so named by Tasman in 1642; not, however, the Storm Bay laid down in the present charts, but that now termed D'Entrecasteaux's channel, which runs inland for ten leagues, and communicates with the true Storm Bay of Tasman. Captain Furneaux then sailed along the Van Diemen coast to the northward, to discover whether it was separated from New Holland, or was a peninsula forming part of the main land; but he finally steered for New Zealand, giving it as his opinion that "there was no strait between Van Diemen's Land and New Holland, but only a very deep bay." Captain Cook, with H.M.S. *Resolution* and *Discovery* made the south-west Cape, 24th Jan. 1777, and after steering eastward, anchored, as Furneaux had done, in Adventure Bay on the 26th; but captain Cook proceeded on his voyage, still ignorant of the insularity of the land.

In 1792, Bruni D'Entrecasteaux, a French rear-admiral, with two ships of war, *La Recherche* and *L'Espérance*, made the coast of Van Diemen's Land, to obtain supplies of wood and water; and while intending to enter the Storm Bay of Tasman, entered the Adventure Bay of Furneaux, up which he sailed thirty miles, and found it to be separated by a small island from Storm Bay. The island he named *Bruny*, and the channel *D'Entrecasteaux*, and then sailed to the eastward without ascertaining that Van Diemen's Land was insulated.*

Captain Bligh, in 1788, in the *Bounty*, and in 1792 with the *Providence* and *Assistance*, and captain John Hayes, of the Bombay Marine, with the private ships *Duke* and *Duchess* from India, in 1794, visited different parts of the Australian coast, without adding much to our geographical knowledge.

The survey of admiral D'Entrecasteaux extended from Cape Leeuwin to 132° E. long. in Australia, and comprised the southern extremity of Van Diemen's island, including the river Derwent and the channel which bears the name of the accurate surveyor. Captain Flinders states that "the charts of the last survey, particularly those relating to the bays, ports, and arms of the sea of the south-east of Van Diemen's Land, and constructed in this expedition by M. Beau-

temps Beaupré, and his assistants, appear to combine scientific accuracy and minuteness of detail, with an uncommon degree of neatness in the execution. They contain some of the finest specimens of marine surveying perhaps ever made in a new country."

The able, but unfortunate French navigator, La Perouse, visited the east coast of Australia with the French ships of war, *La Boussole* and *L'Astrolable*; these vessels were last seen by any Europeans in January, 1788. When captain Phillip, R.N., and the fleet of convicts sent out to form the penal settlement in New South Wales, were removing from Botany Bay to the more eligible adjacent station of Port Jackson, La Perouse was entering Botany Bay to refit. The British and French commanders exchanged the civilities common to their gallant profession. La Perouse perished shortly after at the Mannicolo islands: it is supposed that the vessels were lost on a coral reef. After a lapse of forty years, captain Peter Dillon, in 1826, discovered relics belonging to the French ships, and placed beyond a doubt the period and place of their loss.

After the formation of the British penal settlement at Port Jackson (Sydney), in 1788, attention was directed to the eastern and southern shores of Australia; and Mr. Bass, surgeon of H.M.S. *Reliance*, and lieutenant (afterwards captain) Flinders in a little boat called *Tom Thumb*, eight feet long, aided only by a boy, commenced a survey of the coast. Mr. Bass was afterwards reinforced with a whale boat, six men, and six weeks' provisions; in this open boat, and in boisterous weather, he explored the south-east coast for 600 miles, entered what Furneaux considered a "deep bay," and in 1798, became satisfied that there was a strait separating Van Diemen's Land from New Holland. On his return to Sydney, governor Hunter was induced to verify the results of Mr. Bass's observations by sending lieutenant Flinders and Mr. Bass in the colonial schooner *Norfolk*, of twenty-five tons burthen; with this little vessel, they sailed through the strait now called Bass's Strait, and by circumnavigating Van Diemen's Land demonstrated for the first time its insularity, and completed the coast line of Australia. The result of these remarkable labours of Bass and Flinders, was a survey of the coast

* The mistake of D'Entrecasteaux was then a very probable one, for notwithstanding our extended knowledge of the coast, a similar error was committed during the night by a vessel in which the author sailed some

years since. Navigators should be cautious in approaching this part of the coast, as they are very liable to be deceived by the headlands.

line from Sydney to Western Port, of the islands in Bass's Strait, of the bays and coves of the river Derwent, and of Tasman's Peninsula. Sir John Franklin, recently lieutenant-governor of Van Diemen's Island, whose presumed loss in the arctic regions the nation now mourns, began his noble career under Flinders. At his own cost, Sir John erected, in 1841, a lofty stone obelisk on Stamford hill, near Port Lincoln, South Australia, to commemorate the great services of "the illustrious navigator and his honoured commander." Flinders himself recorded a high eulogium on his "high-spirited and able colleague," surgeon Bass, who well deserves "an honourable place in the list of those whose ardour stands most conspicuous for useful knowledge." In December, 1800, captain Grant, in H.M. brig *Lady Nelson*, passed through Bass's Straits, and explored the coast from Port Western to $140\frac{1}{4}^{\circ}$ of E. long. In 1802, lieutenant John Murray, who succeeded captain Grant in the command of the *Lady Nelson*, discovered Port Phillip ten weeks previous to the arrival of captain Flinders in that bay.

The survey of captain Baudin of the French navy in the *Geographe*, was contemporaneous with that of Flinders; it comprised the southern coast of Australia between $35^{\circ} 40'$ and $37^{\circ} 36'$ S. lat., and $138^{\circ} 58'$ and $140^{\circ} 10'$ E. long., a coast line of about 150 miles in length, devoid of rivers or inlets; also the north-west coast, from Cape Leeuwin to Rottenest Island, Swan River, and thence partially to Cape Londonderry on the north coast.

In April, 1802, Baudin and Flinders met in the neighbourhood of Spencer's Gulf, and although their respective countries were engaged in fierce hostilities, the commanders met on board the *Geographe*, and communicated freely to each other all the information that was likely to be useful. The expedition of captain Flinders was thought to be secured against the chances of war by a passport granting it protection, assistance, and free ingress and egress to and from the ports of the French republic; but when Flinders, driven by stress of weather from the west coast of Australia, was obliged to seek shelter at the Isle of France, or Mauritius, then a French colony, he was most unjustly and cruelly detained a prisoner for eight years, by the governor-general De Caen, and his charts seized, despite passports and remonstrances.

The gradual progress of discovery on the

Australian coast has now been chronologically detailed to the commencement of the present century. The subsequent voyages and discoveries of those skilful and enterprising British seamen, of Flinders (1801-2), King (1818-20), Wickham and Stokes (1837-43), of Blackwood (1842-46), of Stanley, Bremner, Chambers, Heywood, Hobson, and other naval officers, have furnished valuable nautical surveys of the coast line of this vast island, the whole of which now appertains to the British empire.

The surveys of Flinders include the south, west, and north-west coasts of Australia to the Gulf of Carpentaria, and high credit is due to this intrepid and persevering surveyor; captain P. P. King's invaluable labours include 2,700 miles of coast, principally on the north and east, and involved 40,000 miles of sailing. The interesting examinations of captains Wickham and Stokes commenced on the east coast, and included the Gulf of Carpentaria, Torres Straits, the north and north-west coast, Dampier's Archipelago, Houtman's Abrolhos, the Swan River coast, Bass's Strait, and Adelaide, South Australia. Captain Blackwood's meritorious exertions were chiefly devoted to Torres Straits, the dangerous reefs and islands in that route, and the north-east coast of Australia.

Reserving for separate consideration the aspect of the several colonies in Australia—viz.: *New South Wales* on the east coast; *Port Phillip, or Victoria*, on the south-east, adjacent to Van Diemen's Island; *South Australia*, on the south coast, westward of Port Philip; and *Western Australia*, or *Swan River*, on the western and south-western shores, a few general remarks on the physical features of Australia may be useful.

PHYSICAL FEATURES.—The outline of Australia is singular: the parallelism of the coast lines gives a geometrical form to the island; the greatest width, from east to west, is in the parallel of 25° ; the greatest length, from north to south, is from Cape York to Wilson's Promontory. Nearly in the same meridian, viewing Van Diemen's Island as a continuation of Australia, its projection on the south, in a direct line with the Carpentaria promontory on the north, is remarkable. The deepest indentations of the island are opposite each other on the north and south coasts. The east and west coasts have nearly the same general configuration; and at Sandy Cape, on the east coast, and to the northward of

the same parallel, on the west coast, at North-West Cape, there are two peculiar projections of the land. The trend on the shore from west to north is parallel with that from south to east; the indentations between Coburg peninsula and Cape Londonderry on the north-west, nearly correspond with the expansions on the south-east; the trend of the coast from Kangaroo Island towards Fowler's Bay on the south, is parallel with that of the opposite coast line of the Gulf of Carpentaria: finally, the great Australian Bight on the south somewhat corresponds with the protrusion of Arnhem's land in Northern Australia. The peculiar external form of Australia may be, in some degree, owing to the different degrees of force to which the land is subjected by the surrounding waters. On the south, where the coast is not protected by Van Diemen's Island, the tremendous effect of the unbroken roll of the ocean from the pole is manifested in the deep Bight. On the north-west the full swell of the Indian Ocean produces a corresponding slope of the coast; on the north-east the Pacific flows with majestic sweep from the American continent; and on the north, the fluctuating pressure caused by the monsoons is broken by the islands of the Eastern Archipelago.

The coast-line of Australia is marked by deep gulfs, fine bays, and capacious havens. On the north is the large gulf of Carpentaria, with York Harbour or Endeavour Strait at the north-east limit, and Melville Bay at the north-west entrance; Van Diemen's Gulf, Cambridge Gulf, Admiralty Gulf, Brunswick Bay, Queen Charlotte's Channel, Melville Island, Raffles Bay, and Port Essington, afford many secure ports on the north and north-west shores. On the west there are Prince Regent's inlet, Doubtful Bay, King's Sound, Buccaneer's, and Dampier's Archipelagos, Exmouth Gulf, Shark's Bay, Freycinet Harbour, and Swan River. Port George the Fourth, Hanover Bay, and Camden Sound, lying close to each other, are noble havens, and have a fine tract of country in their rear. On the south, King George's Sound, Fowler's Bay, Spencer's (900 miles deep) and St. Vincent's Gulfs, Encounter Bay, Portland Bay, Port Phillip, and Western Port. On the east are Jervis Bay, Botany Bay, Port Jackson, or Sydney, Newcastle, Port Stephens, Port Macquarie, Moreton Bay, Hervey Bay, Port Curtis, Keppel Bay, Port

Bowen, Princess Charlotte Bay, and numerous secure roadsteads situated on the north-east, between the Barrier reefs and the coast.

Australia, like the other continents, has an island of considerable magnitude attached to it, namely, that of Van Diemen, or Tasmania, which lies at its southern extremity. The other principal islands are Melville and Bathurst on the north, Kangaroo, near St. Vincent's Gulf, and Groote, in the Gulf of Carpentaria, Great Sandy Island on the east, and exactly opposite it, on the west coast, Dirk Hartog's Island. There are several smaller islets and groups, viz.—Prince of Wales' Island, off Cape York, the Wellesley, Pellew, and others, in the Gulf of Carpentaria; Wessel, and English Company Isles, near Melville Bay; Buccaneer's Archipelago of islets, south-west of Cape Londonderry, Dampier's Archipelago, Barrow, and other islands north-east of the north-west cape, off De Witt's Land; Bernier and Dorre, off Shark's Bay, Rottenest, &c.; at Swan River, Recherche Archipelago, on the south coast, between King George's Sound and west of the great Australian Bight; Nuyts' Archipelago; Investigators' and Flinder's islands, west of Spencer's Gulf; King's, Furneaux, and others in Bass's Straits, between Australia and Van Diemen's Island. The south-east coast is deficient in islands, and has few indentations like the north or south coasts. From Wilson's promontory to Moreton Bay there are no islands but those of Stradbroke and Moreton, and the Solitary Isles north of Port Macquarie. Howe's and Ball's Pyramid Islands, east of Port Macquarie, are 400 miles from the shore, and do not partake of the features of Australia. They are very remarkable, and rise in basaltic columns from the sea. Proceeding to the northward, along the east coast, we find Great Sandy Island, the Capricorn group, (where the coral islets commence), including Bunker Islands, Keppel Island, the Northumberland, Percy, Hillsborough, Palm, Lowe, and other minor islands. The Capricorn group of islets, on the north-east coast, have the tropic of Capricorn and the 152nd degree of E. long. passing through them.

Coast Rivers.—In no other part of the globe could a similar extent of coast line be found with so few navigable rivers. The *Murray*, in South Australia; the *Hunter* and *Brisbane*, in New South Wales; the *Albert*, disemboguing into the Gulf of Carpentaria;

the *Adelaide*, into Van Diemen's Gulf; the *Victoria*, into Cambridge Gulf; the *Prince Regent*, *Fitzroy*, and *Glenelg*, on the north-west coast; and the *Swan*, in Western Australia, are the only streams navigable for ships for even a few miles from the ocean, where their entrances are barred.

So far as the country is known one mountain range bounds the coast from Bass's Straits to York Peninsula, and is continued in what Leichardt calls a "collar" round the Gulf of Carpentaria; on the western shore ranges run parallel with the coast, and slope off towards the east and north. Probably the highest mountains will be found at the Australian Alps, in the south-east, and at Arnhem and Tasman land in the north-west. The dip of the high land on the east coast appears to be from south to north, viz., from Mount Kosciusko, 6,500 feet high in the Australian Alps, in $36^{\circ} 20'$ S., to Mount Hinchinbrook, 3,500 feet, in $18^{\circ} 22'$ S.; Cape Direction, 1,250 feet, in 13° S.; and Pudding Pan Hill, only 384 feet in $11^{\circ} 19'$ S. From Fowler Bay, in the Australian Bight, westward to King George's Sound, there are low cliffs of a calcareous marine formation, or sandy dunes, with occasional points of granite; the general elevation being from 300 to 500 feet, without a single watercourse for 800 miles; and according to an intelligent writer in the *Sydney Herald*, the north-west coast between the parallels of 16° and 21° is composed of low sandy beaches, with no appearance of high land behind them. With these two exceptions the whole of Australia is surrounded by a mountain belt, from 2,000 to 6,000 feet in height, at a distance of 50 to 100 miles from the coast, with collateral spurs or buttresses. From the outer and most precipitous side of this girdle short rivers flow to the sea coast; from the inner and less precipitous face, which in several places declines in successive terraces, different rivers flow, it is supposed, towards some great central basin, or are swallowed up in the burning sands, or evaporated by the intense heat of a tropical atmosphere, increased by the distance of the central parts of Australia from the sea, or possibly these inland streams may be absorbed by immense marshes. But all these suppositions would seem to indicate that this vast island is of recent date compared with other portions of our globe, and that the interior is still little better than a slightly elevated ocean bed, with a mountain crust around it.

Coast Line of Unsettled Parts of Australia.—The information obtainable on this head is fragmentary and imperfect, but I shall endeavour to frame a connected view, so far as is known, of the physical features, commencing with *Cape Capricorn*, on the east coast, in $23^{\circ} 30' 30''$ S. lat. The most remarkable features on the adjacent shore are—Round Hill, 2,000 feet; Mount Larcom, 1,800 feet; and Peaked Hill, which stand out in bold relief against the pure blue of an Australian sky; they are fronted with groups of coral islets connected with the Great Barrier Reef.* *Cape Capricorn* itself has a hump resembling a haycock.

Southward of Port Bowen there are two peaks with an elevation of about 2,000 feet, which form the northern end of a high rocky range. The country surrounding Port Bowen is picturesque, many ranges of hills, both peaked and roundbacked, rise near the coast, and have an elevation in the interior of 2,000 to 3,000 feet.

In consequence of shoal bars there is not an easy entrance for large vessels much further than *Entrance Island*. The country, when visited in February, 1843, appeared dried up; not a drop of fresh water to be found anywhere.† But this may not always be the case. Dr. Leichardt, speaking of the country contiguous to the north-east coast in 1844, assigns reasons for supposing that part of Australia to have been exceedingly dry for a series of years.

About *West Hill* and *Broad Sound* the coast of the main land is formed of a low sandy shore, with a flat country of five or six miles wide, backed by a bold range of lofty flat-topped hills, with here and there a conical peak. *West Hill* rises directly from the sea to the height of a thousand feet. The seaward cliff of *West Hill*, and, in the opinion of Mr. Jukes, the mass of the hill itself, is composed of very fine grained trap or basalt, with small crystals of feldspar only visible with a lens. The rock is split by innumerable joints and veins, crossing at all angles into masses of different shapes.

The *Northumberland Islands* have an elevation from 200 to 400 feet; in one instance of 720 feet. The crests of the western isles are covered with pine trees. The *Percy Islands* are also elevated, wooded, and composed of a trap-like compound with an aspect of serpentine.

* Stokes's Discoveries in H.M.S. *Beagle*, 1837—43.
 • Jukes's Voyage of H.M.S. *Fly*, 1842—46.

At *Cape Palmerston* there is a small headland of red quartzose rock, and adjacent there is a cove five or six miles deep by three wide. Near to the harbour are grassy slopes, open woodland, and hills with jungle and lofty trees.

The coast between *Broad Sound*, in $22^{\circ} 15'$ S. lat., and *Whitsunday Passage*, in $20^{\circ} 20'$ S. lat., differs in some respects from any part of the coast seen by the officers of *H.M.S. Fly*. A solid range of uniform hills, at a distance of five to ten miles from the coast, bounds a fine undulating tract of country, well watered, covered with abundant close grass, timber of large size and various descriptions, and many small bays and inlets.

Cape Hillsborough is a bold headland, 900 feet high, and very steep all round.

Cumberland Island is a singular mass of rocks, and appears as if made up of angular fragments of compact felspar cemented together.

At *Port Molle*, at the north-west end of *Whitsunday Passage*, the shores rise in a steep slope, and in some of the places adjacent to the strait, have an elevation of several hundred feet, covered by magnificent forests, the greater part of which are of the pine species. This timber tree, which resembles the *Norfolk Island pine*, is found along the east coast from *Port Bowen* to *Cape Melville*, but *Whitsunday Passage* seems to be the favourite locality.

Mount Dryander, on the promontory which terminates *Cape Gloucester*, is more than 4,500 feet high. There are hills around to the height of 700 to 1,000 feet.

Cape Upstart, so called by captain Cook, consists of a huge mass of granite, about 2,000 feet high, rising abruptly from the water on all sides, and connected with the mainland by a mangrove swamp. It has a singularly rugged and barren aspect, and appears like a vast mass of ruins,—its crests are covered by huge boulders, or blocks of loose rock, with patches of scrubby vegetation. The cape is insulated by a small creek winding round the southern foot of the high land, and connecting the bays on the east and west sides of *Cape Upstart*. Immense beds of mangrove stretch round the head of *Upstart bay*, and a wide flat runs for some miles beyond them into the country, over which are seen some bold hills, in separate groups, rising like islands out of the level land.

Captain Blackwood, R.N., crossed a very

pleasant grassy country, towards the hills in the north-west.

Mount Elliott, lying about forty-five miles west and by north from *Cape Upstart*, is a long level hill, peaked at its northern extremity.

Wickham River, north of *Cape Upstart*, is approached through heavy breakers, and the opening seen by *H.M.S. Fly* in 1844 was about three miles wide, and had a depth of three and a half fathoms, about 200 yards from the north shore, where the land was an open forest country, with green grass and scattered trees. The south shore seemed a great mangrove swamp, with a spit of sand running out to sea among the breakers. At a distance of seven miles from the inside of the breakers, the reach of the river curved to the west, became shallower, leaving the steep cliff and forest land of the north or left bank, passing over flats of sand and pebbles; beyond this the boat could not proceed. From the top of the river cliffs, forest land was seen stretching into the interior, the trees close together, and the underwood thick.

The land round *Cape Bowling Green* is scarcely above the level of the sea, and is probably the delta of a large river. Palm islands are lofty, wooded, and have a picturesque appearance, especially *Magnetic Island*, so named by Cook. The mountain range seen from *Cape Bowling Green* is at least thirty miles in the rear.

Cape Cleveland is, like *Cape Upstart*, abrupt and broken, but more woody, having fine pines in many of its gullies. At this point the cordillera of Eastern Australia tower to a considerable elevation close to the coast. From *Cape Grafton* to *Cape Tribulation* precipitous hills, bordered by low land, form the coast line; the latter-named cape consists of a lofty group with several peaks, the highest of which, in the shape of a finger, is visible from the sea at a distance of twenty leagues.

Gould Island Peak, in *Rockingham Bay*, is nearly 1,400 feet above the sea; about five miles to the south-west of it is *Mount Hinchinbrook*, 2,500 feet high. It is a broken mass of hills, covered with ragged knolls, and sharp inaccessible pinnacles, furrowed by deep and precipitous ravines. On the mainland is an unbroken range of high land, none of less than 2,000 feet elevation, stretching along the shore to the southward, and after sweeping round *Rockingham bay* it rises and spreads to the northward into

still loftier and more broken mountainous elevations. The summit of this range, near Rockingham bay, is very level, but there are many projecting buttresses and ridges on its seaward slope, which is everywhere very steep, and apparently furrowed by many gullies and water-courses.

Endeavour River, where captain Cook careened in 1770, after grinding the bottom of *H.M.S. Resolution* for twenty-three hours on Endeavour reef, has for its external aspect bare and rocky hills of moderate height, with their seaward slopes almost destitute of vegetation. On the north shore is a line of sand dunes beneath the higher hills; on the south shore is a hill of moderate elevation, tolerably clothed with small eucalypti, and sloping down to a grassy flat, fronted by a line of mangroves. Beyond these the land is low for some miles, and then backed by tabular flat-topped hills a few hundred feet high, and of a different aspect to those usually seen on the coast.

Cape Bedford is one of the most remarkable features on this coast, being a bluff detached piece of table land, surmounted by a singular low line of cliffs, which forcibly reminded captain Stokes of the lava-capped hills on the river Santa Cruz, in East Patagonia.

Cape Flattery is a conspicuous headland, consisting of two peaks, with a slope between them.

Lizard Island, in $14^{\circ} 40'$ S. lat., has a bold aspect of nearly 1,200 feet elevation, composed entirely of granite, and nearly destitute of wood; on the westward is a grassy well watered plain, with some smaller ridges. The appearance of the coast now changes from moderately high conical-shaped hills to table-land ranges of 500 to 600 feet, trending about south-west and by west.

Cape Melville, which stands out like a shoulder for more than forty miles beyond the coast line, is composed of piles of reddish coloured stones, scattered about in the utmost confusion, and in every possible direction, over a high ridge. There are several dangerous islands and rocks off this headland.

Princess Charlotte Bay is large and free from shoals; at the head of the bay is a remarkable level-topped hill, conspicuous from the low nature of the surrounding country.

Claremont Islands are a low rocky group, surrounded by coral reefs.

Cape Direction has a moderately increasing height, compared with the coast immediately to the southward. A round hill, in 13° S., has an altitude of 1,250 feet.

Restoration Island [visited by captain Bligh in the *Bounty* launch, in 1789.] in $12^{\circ} 37'$ S., is a rocky lump, terminating in a granitic peak, 360 feet high. It was so named by Bligh, from his having seen it upon the anniversary of the recal of Charles II. to the throne of England.

Fair Cape, and thence to the northward, presents a series of undulating hills from 500 to 700 feet in length. The monotonous aspect is broken by *Pudding-pan hill*, so named by Bligh from its resemblance to a sailor's pudding-pan. It has a height of 354 feet.

Cape York, the most northern point of Australia, has a small rocky island not quite 300 feet high, steep, and nearly conical, separated from the main land by a narrow boat passage. Immediately south of Cape York Island the land rises into a somewhat sharply-peaked hill, with an elevation of 420 feet. It is called Bremer Peak. To the eastward is a shallow bay, with a flat sandy beach, backed by a belt of jungle, then a small woodland, and behind rocky hills 300 feet in height, one ridge of which comes down to the beach. Excellent fresh water is everywhere procurable by digging, and this position seems well adapted for a British settlement, as it would, in fact, form a "corner shop" for all vessels passing to the eastward.

Endeavour Strait, between Cape York and Cook's islet, is a safe harbour for shipping, except in one or two places near the shore. The west entrance is encumbered by large sand banks, through which, however, there is a safe passage, with never less than four fathoms water. The islands which stretch to the northward from Cape York, across Torres Straits to New Guinea, are all rocky, steep, many 500 feet high, and composed, like the rocks of the adjacent main land, of porphyry, sienite, and siliceous schist. Mr. Jukes considers them merely the submarine prolongation of the great mountain chain of the east coast of Australia, and which passes from New South Wales to the southward, through Bass' Straits to Van Diemen's Land. The loftiest and most massive portion is between Cape Upstart and Cape Melville, whence it gradually decreases to Cape York, where the hills are 500 to 600 feet high.

Possession Islands in the mouth of En-

deavour Strait, and the larger islands to the northward, are all rocky and barren, with here and there small fertile and cultivable spots, and by no means deficient in beauty, being of varied and undulating surface, with lofty peaks and ridges, and sheltered valleys, but they seem to be mostly destitute of water except in the rainy season; their inhabitants are few and scattered, and appear to be peaceable and well-disposed.

Booby Island, much frequented by boobies, pigeons, and quails, called also the "Post Office," forms the western limit of all the dangerous part of Torres Straits in the ordinary track of vessels, and for half the year it is a constant place of resort for vessels proceeding to India and China from Australia. It is a mere rock, about fifty feet high and a quarter of a mile in diameter, the summit consisting of bare porphyry.

A shed has been erected, beneath which is a large chest containing a blank book with pens and ink, a bag of beef and some biscuit for any boat's crew escaping from a wreck. Letters are left here by ships, and notices are entered in the book announcing their safe arrival. (A similar practice prevails at the Galipago Islands in the Pacific among the whalers.) All the ships which have recorded their passage at the "Post Office" appear to have entered the Barrier Reef between the parallels of $11^{\circ} 30'$ and $12^{\circ} 10'$, generally about $11^{\circ} 50'$, reaching Sir Charles Hardy's Island the same day. They all note a strong northerly current outside the reef, in some instances of nearly three miles an hour. The time occupied in making the passage from Sydney by the outer route was from fourteen to twenty days, which was shorter than the route between the reefs and the main land, though attended with much greater risks. In traversing the "inner route," vessels are obliged to anchor every night, which is a severe labour for the small crew of a merchant ship.

The *Barrier Reefs* are a peculiar and important feature in the N. and N.E. coast of Australia; the great coral reefs form a vast submarine buttress which skirt the shore, and in the instance of the "*Great Barrier Reef*" extend from Breaksea Spit in $24^{\circ} 30'$ S. lat. and $153^{\circ} 20'$ E. long., to Bristow Island on the coast of New Guinea, in $9^{\circ} 15'$ S. lat. and $143^{\circ} 20'$ E. long., a distance in a straight line of about 1,100 geographical, or 1,260 statute miles—the longest known coral reef in the world. This reef stretches along the Australian coast at a mean distance of

thirty miles from the land; the outer edge being in some places not more than ten or fifteen, in others 100 miles distant. Outside the barrier there are numerous detached reefs, of greater or less magnitude, extending from Torres Strait to New Caledonia; but the distance of these isolated reefs from the Great Barrier, is from sixty to one hundred miles. There are therefore two passages for vessels sailing from Sydney by the N.E. route to Singapore, China or India, *via* Torres straits—*first*, the *INNER* passage, about thirty miles wide, between the main land and the Great Barrier; and *second*, the *OUTER*, sixty to one hundred miles wide, between the Great Barrier and the detached reefs and coral islets, which are so numerous that Flinders gave to Torres Straits the appellation of the coral sea. Mr. Jukes, the naturalist, on board *H.M.S. Fly*, captain Blackwood, recently engaged in laying down beacons, by which vessels proceeding to the eastward through Torres Straits might be enabled safely to enter the principal openings in the Great Barrier in order to pass between Australia and New Guinea, has given in an interesting "Narrative of the surveying voyage of *H.M.S. Fly*," useful details respecting these reefs, on the authority of Mr. Evans, master of *H.M.S. Fly*. It appears that the Great Barrier reef is composed of different formations of coral, viz.:—the (1) *linear*, (2) *detached*, circular, or oval groups. The linear rise from great depths, have a breadth varying from a quarter of a mile to a mile; are in length from three to fifteen miles; have on the outer side an unfathomed depth, and on the inner, soundings of from ten to twenty fathoms. The detached reefs are generally circular or oval, flat at the surface or near the level of low water, the edge gradually rounded off, sloping down into deep water, sometimes to 200 fathoms, and at Wreck Bay to 285 fathoms without soundings. The centre consists generally of dead coral branches, among dazzling white sand; the living corals are more to the edge of the reef. The line of reefs runs N. and N. by E., whilst the Australian coast trends to N.N.W.; the distance from the land is gradually increased, and at Cape York in $11^{\circ} 40'$ S. lat. the passage is eighty to ninety miles wide; it is, however, supposed there are several inner reefs, and as the coral polypi are continually sending up new banks, this passage, even with its smooth water, must always be hazardous. On the authority of captain Flin-

ders, it is stated that the Great Barrier reef towards the south, is ninety to one hundred miles from the shore, with which it has no cross communication. The breadth of the reef towards the south is forty or fifty miles; it becomes narrower towards the north. At Cape Tribulation, in about 16° S. lat., the Barrier Reef closes in with the shore. For about 350 miles from the southern opening off Breaksea Spit, there is no navigable passage through the barrier that can be safely trusted; there are some crooked intricate openings. The interior passage between the reef and the land is remarkably clear from dangers, except in the vicinity of the numerous little islands with which it is dotted; the depth of water at a distance from these islands is very uniform. When the wind is from the east, the sea breaks upon the outer margin of the reef with terrific violence, but the inner waters are perfectly tranquil.

Wreck Reef, upon which captain Flinders was wrecked with H.M.S. *Porpoise* and *Cato*, in 1803, is 300 miles to the north-west of Breaksea-spit, and it was then an incipient island, in length 150 fathoms, by fifty in breadth, with a general elevation of three or four feet above ordinary high water. A few diminutive salt-water plants resisted the saline spray; the eggs of sea-fowl were observed; and probably now there are cocoanut or other trees, whose nuts or roots have been drifted there by the ocean.

On a reef may be seen coral growing beneath the surface of the clear water, in the shape of wheat sheaves, mushrooms, stag's horns, cabbages, and a variety of other forms, with vivid tints of every shade betwixt green, purple, brown, and white; equalling, says Flinders, in beauty, and excelling in grandeur the most favourite parterre of the curious florist.

The manner in which a coral reef is formed is very singular. The animalcules which produce the coral, commence with singular instinct to make their structure perpendicular; when they cease to live, the whole mass becomes agglutinated, and the interstices are gradually filled up by sand and broken pieces of coral washed up from the sea, until a mass of rock is formed. Another race of animalcules then proceed to build on this foundation. As each successive generation perishes, another takes its place, to increase the elevation of their habitation, and the coral wall, where the winds are pretty constant, first reaches the

surface of the ocean to *windward*: so that the insect may have shelter to send off numerous colonies to *leeward*, protected from the wind and surf. Hence the greatest depth of water and the highest part of a reef is always to windward, and the wondrous structure thus raised has, on the one side, a nearly perpendicular elevation of 200 to 300 fathoms. When the reef is raised above high-water mark, the coral insect ceases to exist. The different corals, in a dead state, are converted into a solid mass of a dull white colour; and some lumps, called "negro heads," higher than the surrounding mass, become blackened by the weather. Sponges, sea-eggs (*echinæ*), enormous cockles (*chamagigas*), and "cucumbers," (a large slug called *holothuria*, by the French *bêche de mer*, by the Chinese *trepang*), and other substances soon fill the crevices of the reef: sand accumulates; sea-birds make the bank a place of incubation; soil is formed; the seeds of shrubs and trees, which constitute the food of some birds, are deposited on the island, which soon becomes a mass of living verdure.

The beacon erected by captain Blackwood, of H.M.S. *Fly*, on Raines islet, as a mark for the best passage through the outer line of reefs, is a circular stone tower, forty feet high, and thirty feet in diameter at the base, where the walls are five feet thick. Internally it is divided into three stories, accessible by ladders. The roof is a dome-shaped frame of wood, covered by painted canvas. The summit is raised seventy feet above low water-mark. There is a large tank adjacent; and a garden has been planted with cocoa-nuts, maize, pumpkins, &c.

Torres Strait is one mass of islands, reefs, and shoals, with six to twelve fathoms water at the narrowest part, and nowhere deep water, so that with clear weather, and the sun vertical or in the rear, a vessel may be safely navigated. The beautiful light of the tropics is increased by the reflection of the nearly colourless bottom, covered with various molluscæ, some perfectly transparent, others of various hues. Fish of all sizes, shapes, and colours are seen; the voracious shark eagerly pursuing his prey, the turtle rolling along in his unwieldy shell, and sea-snakes of large dimensions and of glowing lustre may be traced in their rapid gliding movements as clearly as if they were flying in the air.

The *Gulf of Carpentaria* extends inland 600 miles, and has a breadth of 400 miles

its coast line measures about 900 miles, including the bays and windings. The shores are almost invariably low, and the water everywhere shallow towards the edge, with a bottom of blue mud or sand. The greatest depth of soundings in crossing the southern part of the gulf from coast to coast, is fifteen fathoms; fine, dark, sandy, mud bottom. The lee shores are covered with mangroves, behind which water is often seen. Trees (palms of considerable height) are found on some elevated places, but barrenness is the general character of the surface. Flinders says that for the space of 600 miles, between Endeavour Strait and a range of hills on the main land, west of Wellesley Island, at the bottom of the gulf, no portion of the coast is higher than the mast-head of a ship; some part of Wellesley Island is more elevated than that of the main, but the highest does not rise 150 feet. The general appearance of the head of the gulf is that of a low mangrove shore, ten to thirty feet high, over which the interior is not visible from the offing. Nearly 200 miles of the south-eastern coast were minutely examined by the surveying officers of *H.M.S. Beagle*; twenty-six inlets were discovered, of which two proved to be rivers, whilst three more were nearly as promising.

Van Diemen's River, on the south-east coast of the gulf, is considered by Stokes to be an inlet rather than a river, but its waters appear to be less salt at low tide. The bar, three-quarters of a mile off the mouth of the inlet, has only two feet on it at low water, but the first reaches of the inlet or river have a depth of one and a half to three fathoms, and a width of 200 to 300 yards; the stream then becomes much narrower, and so tortuous, that its windings of twenty-seven miles only brought the explorers to eight miles, in a 60° S.E. direction, from the entrance; then dividing, one branch trends south, and the other east, each being about fifteen yards wide and two feet deep; the water was quite salt, and the mangroves were growing on either side at the point where the examination was abandoned. At the mouth of the river the coast bears the same low, sandy, or mangrove-clad appearance noticeable in other portions of the eastern coast of the Gulf of Carpentaria; the highest elevation seen was six miles from the entrance, where the banks attained an elevation of ten feet, the rise being marked by a growth of eucalypti of tolerable size; elsewhere the banks rose scarcely three feet

above high-water level, and were generally fringed with mangroves, behind which, in many instances, extensive clear flats were observed, reaching occasionally from the sides of the inlet toward the upper parts, and when seen in June, they were the resort of large flights of the bronze-winged pigeon.

Flinder's River, on the south shore of the Gulf, was discovered and explored by captain Stokes, to the extent of thirty miles to 17° 51' S. lat., in a general S. by E. $\frac{1}{4}$ E. direction from the entrance. It separated into two branches, one taking an easterly, and the other a southerly direction. After passing the sea-bank, the depth was one fathom; further inland, the river expands into a beautiful sheet of water, a quarter of a mile in width, but only three feet in depth, here and there diversified by low islets, clad with emerald verdure, with, on the other hand, green and grassy cliffs, sloping almost imperceptibly to the stream; anon the eastern bank becomes steep, overhanging and clothed with a mass of luxuriant creepers, whilst the opposite side presents a low woody patch, partly immersed by the glassy, lake-like waters of the river. At the bifurcation of the stream, a rocky formation of a red ferruginous character was observed. The country appeared to abound in rose-coloured cockatoos, whistling ducks, and vampyres.

The Albert River, discovered by the surveyors of *H.M.S. Beagle*, also disembogues in the southern part of the Gulf, in 17° 35' 10" S. lat., and 7° 35' 50" E. of Port Essington. It has a bar with thirteen and seventeen feet of water, and is navigable for vessels of a draught suited to the bar for thirteen miles, and within five of where the saltiness of the stream ceases. The opening of the river for three miles is almost straight, in a south by west direction, with a width of 200 yards, and a depth of two and-a-half to five fathoms; the banks fringed with mangroves. Eight miles from the mouth are two islands, and two others four miles further up, where the breadth is nearly a mile, and the depth two fathoms. The river winds tortuously to the south and east, through a rising country, with occasional grassy plains, a soil of a light brown colour, void of sand, of considerable depth, and thickly wooded. Further inland the country becomes perceptibly higher,—the scenery extremely picturesque, tall palm trees and bamboos, fifty feet high, rise from the thick foliage on the lower slope of the banks; and at Hope Reach, a magnificent sheet of water

is bounded on either bank by extensive grassy plains, dotted with 'woodland isles' springing from a rich light-coloured mould. The river now becomes a shallow, rapid stream, and in $17^{\circ} 58' 30''$ S. lat., $129^{\circ} 25'$ E. long., the country is most inviting; the line of verdure pointing to the south over the "Plains of Promise."

Bountiful Islands form the eastern part of the Wellesley group on the south-west coast of the Carpentaria Gulf. They were so named by Flinders on account of the plentiful supply of turtle found there. He mentions having obtained from one turtle 1,940 eggs. Near the islands was noticed by Stokes, a "shrubby, thick, compact sort of sea-weed," also seen on the parts of the north-west coast frequented by the turtle, and which is probably their food. The islands are one mile and-a-half from each other; the larger and more northerly is two miles and-a-half long by three-quarters wide, with cliffs on the south-east side of sand and ironstone formation, the latter predominating.

Sweers Island, south of the Bountiful Islands, bounded by low dark cliffs on the north-east, is very woody, and was found to be literally covered with locusts.

Bentinck Island has an extent of ten miles either way, is slightly elevated, thickly wooded, and abounds in several sorts of winged game.

Point Inscription (so called from a tree being found by Stokes, with a notice of Flinders' visit in the *Investigator* forty years previous cut thereon) is in $17^{\circ} 6' 50''$ and $7^{\circ} 28' 30''$ E. of Port Essington.

The west shore of the Gulf of Carpentaria is somewhat higher than the east shore, and from Limmen's Bight to the latitude of Groote Eyland, is lined by a range of low hills. Proceeding to the northward the coast becomes irregular and broken, consisting chiefly of primitive rocks, the upper part of the hills being composed of a reddish sandstone. The general range of the coast, from Limmen's Bight to Cape Arnhem, is from south-west to north-east; and three conspicuous islands at the north-west entrance of the Gulf of Carpentaria have the same general direction. Low land extends westward to *Castlereagh Bay* and *Goulburn's Island*. The *Liverpool River*, on this part of the coast, is four miles wide at its mouth, with a tortuous and rather shallow stream, which has been traced inland to about forty miles from the coast, through a country

whose general elevation does not exceed more than three feet above high-water mark; the banks low, muddy, and thickly wooded. West of Goulburn Island the coast is more broken and irregular, but the elevation is inconsiderable, *Coburg Peninsula* not being more than 150 feet above the sea, and the hills about 300 to 400 feet in the background between the *Liverpool* and *Alligator* rivers. Some of them are remarkable for their linear and nearly horizontal outline, the tops resembling that of a roof or a haycock, the transverse section being angular, and the horizontal top an edge. The *Cobourg Peninsula* projects N.N.W. from the main land of Australia for a distance of fifty miles, the greatest breadth being fifteen miles, and the narrowest, five miles.

Port Essington, in $11^{\circ} 6'$ S. lat., and $132^{\circ} 12'$ E. long., is seven miles wide between Point Smith on the east side, and Vashon head on the west. The port extends about eighteen miles in a S.S.E. $\frac{1}{4}$ E. direction, with a depth of twelve to five fathoms. At the southern end it forms three spacious and secure harbours, each of them extending inwards three miles, with a depth of two and five fathom soundings; mud and sand. The shores of Port Essington consist of little bays and sandy beaches, alternating with bold cliffs and steep clay-banks; inland, a continuous forest of trees, occasionally relieved by undulating or round hills, with an elevation of 100 to 200 feet above the sea. At Port Essington, the sides of the harbour are formed by several low rocky headlands, and cliffs of red or white sandstone and ironstone, twenty to thirty feet high: between the cliffs are shallow coves, backed by mangrove swamps, and behind a low country, with a sombre wood of low eucalyptic trees. *Victoria* (a recently-formed British station) consists of a few wooden houses, on a flat piece of land forty or fifty feet above the level of the sea, on the west side of the harbour. The soil in and around the settlement is poor, and except in the swamps and lowest hollows, composed of the detritus of sand and ironstone, without any apparent mixture of vegetable soil. Large tracts were seen with scarcely a blade of grass, and little or no undergrowth, and the forest, or "bush," looked like a badly-kept gravel-walk, on which a few small trees were growing. When visited by H.M.S. *Fly*, in August, 1843, there was not grass enough, within a mile of the settlement, to feed a single cow. The heat at Port

Essington is very great. In January, 1845, the thermometer stood often as high as 96° at eight a.m., and 100° and upwards at noon. For four years after the settlement was established, captain M'Arthur, and the marines stationed there found it healthy; but the rainy season, which commenced so early as October, 1842, and lasted to April, 1843, is supposed to have caused great sickness, which has continued, with more or less severity, ever since; and the detachment of fifty marines have experienced considerable diminution of numbers, and been several times relieved. By the last accounts at the period at which I am now writing (January, 1850), there were only two or three marines fit for duty. The attempted formation of a settlement at Port Essington has been unsuccessful. Mr. Jukes, who has visited many of the colonies, and whose unprejudiced mind entitle his remarks to considerable weight, visited Port Essington four times, at different periods of the year, and thus strongly expresses his opinion, which he supports by various arguments:—"I believe it to be utterly worthless as a colony, or as an agricultural or commercial possession." It is not adapted for a harbour of refuge, as it is 600 miles from the extreme limits of the sea, where wrecks are most likely to occur; namely, the coral sea and the eastern side of Torres Straits. Low land and shoals, to the east of the harbour, render it difficult to find, and dangerous to approach; and the settlement of *Victoria*, sixteen miles up the harbour, would, in addition to the deviation from the ordinary route of the fair or trade wind, ensure any passing vessel a detention of at least two days to look in there. Added to this, the climate is decidedly unhealthy; many valuable lives have been lost, and the government have consequently resolved to withdraw the men and officers stationed at Port Essington, which is now being done.

Raffles Bay, in $11^{\circ} 12'$ S. lat., $132^{\circ} 26'$ E. long., thirteen miles east of Port Essington, is of a circular form, with a diameter of three miles, and shallow depth, varying from three to four fathoms. The coast about *Port Raffles* is exceedingly low, and has been compared to the coast of Orissa in Bengal, and also to that of Demerara; there are few patches of good soil, and it would seem ill adapted for an agricultural or pastoral settlement. The British colony, established here in 1827, was abandoned in 1829, on account of its unhealthiness, the hostility of

the natives, and the disappointment occasioned by the Malays not coming on fishing expeditions as was expected.

Melville Island, separated from the north coast of Australia by *Clarence Strait*, which is about fifteen miles wide, lies between the parallels of $11^{\circ} 8'$ and $11^{\circ} 56'$ S. lat., and the meridians of $130^{\circ} 30'$ and $131^{\circ} 34'$ E. long., five degrees west of the Gulf of Carpentaria, and distant 330 miles from the island of Timor in the Eastern Archipelago. The extreme length from *Cape Van Diemen* to *Cape Keith* is seventy-five miles; the extreme breadth from *Cape Radford* on the north to *Cape Gambier* on the south is thirty-seven miles. The surface of the island is low and gently undulating, averaging from twenty to seventy feet above the sea, except on the south coast, where some peaks have an altitude of 250 feet. The north line of coast is low, and lined with mangroves; the east, west, and south sides more elevated, sometimes forming abrupt cliffs or clay banks. The interior consists of almost impenetrable mangrove swamps and close forests, the largest timber measuring sixty feet of stem, with a diameter of three feet. The soil, so far as ascertained, is poor. In 1824, a British settlement was formed on the island in *Apsley Strait*, but it was abandoned in 1829.

Bathurst Island, separated from Melville Island by Apsley Strait, is of a triangular shape, each side measuring about forty miles. It is similar in appearance and production to its neighbouring island. The approach to Apsley Strait is intricate, beset with shoals, and notwithstanding an excellent survey made by major Campbell, of Her Majesty's 57th regiment, formerly commandant of Melville Island, too dangerous for general navigation. Apsley Strait, and the creeks and rivers on the north coast of Australia, abound with alligators of fourteen to twenty feet in length, and sea and land snakes two to twelve feet long.

Adelaide River, seventy miles from Port Essington, falls into *Adam's Bay*. *Clarence Strait* has a depth of four fathoms where it empties itself into the bay. Captains Wickham and Stokes, R.N., traced the river in a southerly direction nearly eighty miles, and found it navigable for fifty miles for a vessel of 400 tons. The windings in some places are in the shape of the letter S. At that distance in $12^{\circ} 57'$ S. lat., $131^{\circ} 19'$ E. long., the stream became very narrow, and divided into two branches, one proceeding in a southerly and the other in an easterly direc-

tion. For thirty miles of the upper course of the Adelaide the water was fresh, and the banks, except at the point of separation, not more than five feet above the level of the river. A mangrove swamp occupied the country for fifteen miles towards the mouth, but beyond there a fine prairie was observed, with a soil of light-coloured mould, dotted here and there with "islands of timber," and on the banks a thick jungle of bamboo, some of which attained the extraordinary height of sixty to eighty feet.

Port Darwin, in $12^{\circ} 27' 45''$ S. lat., $1^{\circ} 19' 40''$ E. of Port Essington, has an entrance between white cliffy projections, three miles distant from each other; although of considerable size, it has much shoal water, especially on the west side. The shore is low and sandy, sprinkled with brush-wood, and has singular-looking detached peaks in the background.

Point Pearce, Treachery Bay, where captain Stokes was speared and nearly killed by the natives, is in $14^{\circ} 25' 50''$ N. lat., $2^{\circ} 49'$ W. of Port Essington. It has wooded cliffs of a reddish hue, from the quantity of iron in the rocks.

The Victoria River, one of the largest streams in Australia communicating with the ocean, was discovered by captains Wickham and Stokes, in September, 1839; and explored, with great perseverance, by the latter-named officer. The mouth of the river is in $14^{\circ} 20'$ S. lat., $129^{\circ} 21'$ E. long., between Turtle and Pearce Points, in Queen's Channel, which is there twenty-six miles wide.* The river was traced to a distance of 140 miles from the sea; for the first thirty miles of the upward course its character undergoes little change; the left side continues bold, with the exception of a few extensive flats sometimes overflowed, and a remarkable rocky elevation about twenty-five miles from the mouth, to which the name of *the Fort* was given, on account of its bastion-like appearance (subsequently called Table Hill in the chart). The right shore continues low, studded with mangroves, and subject to overflows. At thirty-five miles from the embouche, the scenery entirely changes; the river runs between a precipitous rocky range of compact sandstone, rising to a height of 700 to 800 feet, and is here sometimes two miles wide, having in several places a depth of twenty fathoms, and rushing with a velocity of six miles an

hour. It continues a rapid stream through this defile for about thirty miles, and is subsequently found flowing slowly across a rich alluvial plain fifteen miles in width. Beyond this plain the Victoria passes through another but less elevated gorge, viz., 400 to 500 feet, whose elevation increases as the river is ascended, and the width, depth, and velocity of the stream decreases. In proportion as the high land or banks approached the channel on one shore, in the same degree it was found to recede from the opposite side; and supposing the whole valley to have been at one time filled with water, the breadth above Reach Hopeless and at Mount Regret must have been from three to five miles. When captain Stokes reluctantly quitted the further exploration for want of provisions, and from the illness of one of his men, with whom it was necessary to return to H.M.S. *Beagle*, he could perceive, "far, far away, the green and glistening valleys through which it wandered:" he felt assured "of the constant presence of a large body of water," and convinced that the Victoria "will afford a certain pathway far into the centre of Australia." The coast to the E.N.E. of the mouth of the Victoria consists of vast ranges strewn over with huge blocks of sandstone; chasms, ravines, and thirsty stone valleys yawn on every side; and all around is broken, rugged, and arid, as if the curse of sterility had fallen on the land, presenting a strong contrast with the country seen up the Victoria river.

Cambridge Gulf, a swampy arm of the sea, extends inland eighty miles in a southerly direction. In its vicinity, the general flatness of the country to the northward and eastward, as far as Cape Wessil, a distance of 600 miles, ceases, and is succeeded by irregular ranges of detached sandstone hills, which rise abruptly from extensive plains of low and level land. From Cape Londonderry to Cape Voltaire the country is of moderate elevation, with mountains in the back-ground. The coast has a direction from north-east to south-west, with numerous indentations, and the adjoining sea is studded with sandstone islands. York Sound, a spacious bay, is bounded by precipitous rocks from 100 to 200 feet in height. It receives two rivers, so far as known, of small dimensions. One of the largest inlets on the north-west coast, termed *Prince Regent's River*, is about thirty miles to the south-west of York Sound. The course is

* *Discoveries in Australia*; by Captain Stokes, R.N.; vol. 2, p. 113.

almost rectilinear for fifty miles in a south-east direction; its rapid passage over stone blocks has prevented its further exploration: but at that distance from the sea it is 250 yards wide, with abrupt banks of reddish sandstone, 200 to 400 feet high. *St. George's Basin*, in Prince Regent's River, is a noble sheet of water, ten or twelve miles across: on its south side deep inlets run up into a low marshy country leading to fertile districts; on the north bank lofty mountains, crowned with castellated summits, rear their sterile heads over the broad waters. Captain Grey, in his very interesting *Journals of two Expeditions of Discovery in North-West and West Australia*, says, that the most remarkable geographical feature in North-West Australia is a high range of mountains, running N.N.E. and S.S.W., (named by him Stephen's range,) from which several branches are thrown off:—1st. One between Roe's River on the north, and Prince Regent's River on the south; 2nd. Macdonald's range, that throws off streams to Prince Regent's River on the north, and to Glenelg River on the south; 3rd. Whateley's range, which gives forth streams to Glenelg River on the north, and to the low country, behind Collier's Bay and Dampier's Land on the south. These branch ranges, as well as the primary one, are composed of ancient sandstone, deposited in nearly horizontal strata, or of basaltic rocks, which are only visible in certain places, and are fully developed in that part of Stephen's range which lies behind Collier Bay, and in the low ground near Glenelg River. The extent of Stephen's range captain Grey was not able to ascertain; but it contains within it the sources of Roe's River, Prince Regent's, and Glenelg rivers, most probably the Fitzroy, those that run into Cambridge Gulf, and perhaps others that have their embouchures between Cambridge and Admiralty Gulfs. Governor Grey does not consider this range very elevated; he estimated the highest parts of the table land of Macdonald's range at 1,400 feet above the sea, and the altitude of the farthest point reached of Stephen's range at 2,500 to 3,000 feet. The rivers on the north-west coast resemble those of the south-east part of Australia. They rise at no great distance from the sea; near their sources are mountain torrents; and, in the low lands, streams, with slow currents, flow through extensive and fertile valleys or plains, subject to considerable inundations. The valleys of the north-west coast are of

two descriptions—those which are almost ravines, enclosed on either side by inaccessible cliffs, or valleys of great width, bordered by fertile and often extensive plains, which occur where the basaltic rocks are developed. One valley in which governor Grey and his party encamped, had a main width of only 147 feet; and, half a mile from the sea, the rocky precipitous cliffs rose 138 feet. The sandstone formation is intersected, in all directions, by valleys of this kind, which are seldom more than two or three miles apart, while the top of the range between them is a table land, divided by lateral valleys, and gently rising towards the interior. Seawards they all terminate in salt-water creeks, having the same narrow, rocky, and precipitous character. The richest land is found upon the valleys of the second class, where the streams flow through wide plains, and have their margins thinly wooded. Fine vegetable mould was seen by captain Grey, ten or twelve feet in thickness.

The Gascoyne River is apparently one immense delta of alluvial soil covered with gently sloping grassy elevations, which can scarcely be called hills, and in the valleys between them are many fresh water lagoons, which rest upon a clay soil. The country is lightly timbered, and well adapted for agricultural or pastoral purposes, but especially for the growth of cotton and sugar.

Further information relative to the north-west coast is very imperfect.

The shore in the neighbourhood of *Hanover Bay* is formed of enormous granite boulders, which render it hardly accessible except at high water. A red sandstone platform is abruptly intersected by singular looking valleys; the precipitous cliffs at first approach each other, and then recede inland in a southerly direction. It was from one of these valleys that captain Grey met so many obstacles in his attempt to penetrate the interior. Hanover Bay is a fine harbour, but not so easy of access from seaward as the contiguous haven of *Port George the Fourth*; but both afford safe anchorage, abundance of fresh water, plenty of fuel, and a fine beach for the seine. Fish, however, are scarce on the north-west coast. The numerous islands and reefs which skirt the shore, greatly diminish the value of these fine harbours.

Red Island, a good guide to the entrance to Hanover Bay or Port George the Fourth, is small, rocky, of no great elevation, with precipitous sides and a clump of trees in the centre. The coast off *Entrance Island* (Port

George the Fourth) is arid and barren, with a line of lofty cliffs occasionally broken by sandy beaches, and a back-ground of rocky sandstone hills very thinly wooded. Generally speaking, the north-west coast is well watered, and although the country around Hanover Bay is very rocky, it has some rich and beautiful vallies.

Doubtful Bay, in $16^{\circ} 4' S.$ lat., has a table land, of sandstone formation, 900 feet above the waters of the bay. The prospect from the summit is cheerless; similar ranges of less height meet the eye in every direction branching towards the interior; those overlooking the eastern shore of the bay are from 600 to 700 feet high. Captain Stokes doubts that any land, as estimated by captain Grey, of two to three thousand feet high, exists within thirty miles of the height on which he stood. Captain King mentions hills of from three to four hundred feet high, at a distance of fifteen miles. It is uncertain whether this bay receives the waters of any river. Mr. Helpman, who explored the south shore of the bay, ascended a high hill, and "feasted his eyes on a most luxuriant well watered country," bearing E.S.E. about eight miles, lying at the eastern foot of a remarkable peak, visible from Port George the Fourth. To the north-east are the *Macdonald range of hills*, which are estimated by captain Grey at 1,400 feet high; Mr. Helpman, however, says they are "apparently of no great elevation." Part of this rich land stretches to within five miles of the south-east part of *Brecknock Harbour*, which is six miles deep, extends gradually from a width of one and three-quarter miles at the entrance, to five at the head, and has a depth of water varying from five to seven fathoms, with a soft muddy bottom. Rocks of transition origin were met with in this neighbourhood, leading to the inference that the soil is of better quality than that formed by the decomposition of sandstone of recent formation. Captain Stokes found, on landing in the neighbourhood at mid-day, "the air quite perfumed with the fragrance of different gums."

The *Montgomery Islands* (so called by captain King, after the zealous and enterprising surgeon of his ship, who here received a spear wound from the natives, which nearly proved fatal) consist of six small rocky islets, resting on an extensive coral flat; the eastern and largest is seventy feet high, in $15^{\circ} 49' S.$ lat. They form good landmarks for the entrance to *Collier's Bay* (distant eighty

miles from Port George the Fourth), which is twenty miles wide at the commencement, and narrows to six near the head of the bay, fifteen miles from *Eagle Point* in $16^{\circ} 10' S.$ lat. The eastern shore has a south and a south by west direction, formed of shallow bights, flanked by hills of moderate elevation. The western shore runs in a north-west by west direction, has a straight rocky coast, over which a range of barren heights rise abruptly.

King's Sound is a deep inlet on its eastern shore; the face of the country is intersected by deep ravines, and covered with huge blocks of coarse sandstone. From the top of one of the highest hills, captain Stokes reckoned more than eighty islands in this portion of the adjacent archipelago. He crossed two deep bays in the sound—the first three and the second four and a half miles wide—both affording good anchorage, but inaccessible from the barrier reefs and islets across their mouths. These bays and the ranges of adjoining hills trended E.S.E. At a distance of seventeen miles in a N.N.E. direction from the ship in $16^{\circ} 24' 30'' S.$ lat., captain Stokes found the same huge masses of rock, and from the summit of one of them observed yet more numerous islands on the coast, which is indented with bays two to five miles in width, containing long narrow islands invariably trending in an E.S.E. direction. The bays generally subsided in a S.S.W. direction. The scenery at *Point Osborne*, in King's Sound, is very wild; on the north side of the Sound, distant twenty-one miles is *Point Cunningham* and *Carlisle Head*, which appear like two high square-looking islands. The eastern shore of King's Sound, at forty miles from Port Osborne in a direct line, and seventy by the winding course of the main land, forms eight bays, varying in depth three to eight miles, and in width two to five: their general trend is E.S.E. Many islets skirt their shores, and almost more than can be counted fill their mouths.

The *Fitzroy River*, which disembogues into King's Sound, was traced by captains Wickham and Stokes for ninety miles; in their opinion, it offers a means of access to the interior, by which future explorers may further improve our geographical knowledge of this part of Australia. The country near the embouche of the river is one vast unbroken level, covered with strong, wiry grass, and intersected by numerous water-courses. The general direction of the Fitzroy is south;

at a few miles from the coast the width suddenly contracts from three miles to one; the banks low and covered with a coarse grass. Further south low grassy islets extend across the river, and leave only confined and shallow channels. Passing these islets at a distance of nearly thirty miles from the sea, the stream again widens to 400 or 500 yards, with a depth of twelve feet at low water. The country then begins to improve; the eastern bank becomes thickly wooded, and subsequently the western is seen clothed with verdure. The course of the river now becomes very tortuous; sometimes in a S.W. by W. direction, then to S.E., round to W.N.W.; next three reaches trending S.S.W., S.W., and S., from a mile to half a mile in length, the depth of the stream varying from one to fourteen feet; width from three to five hundred yards. In the deep reaches were the decaying wrecks of large trees, indicating great inundations. The east bank has here an elevation of twenty feet, is covered with long grass, and thickly wooded with a luxuriant growth of the white eucalyptus. From the *total absence of every appearance of animal life*, an air of solemn tranquillity is impressed upon the scene. Captain Stokes climbed the highest tree on the eastern bank, and the landscape presented to his view was an almost uninterrupted level; open woodlands, with here and there grassy spots, were its prevailing features. Proceeding further, the explorers entered a lake-like reach of the river, trending south for a mile and a quarter, the breadth about one hundred yards, and the depth in many places of twelve feet (twice that usually found in some of the lower reaches), and no current. A coarse red-grained sandstone, with fragments of quartz, were found on the west bank for nearly a quarter of a mile along the edge of the water; over many parts of it was a coating of a dark and metallic appearance, about three inches thick, and the surface in places presented a glazed or smelted appearance. After passing this canal, the Fitzroy divides into two branches, one having an E.S.E., and the other S.S.E. direction; both are with difficulty navigated by boats, and are deep reaches connected by shallows, and subject to inundations, during which the water rises to a height of twenty feet. The country on the westward, as far as could be seen from a high tree, is open, with clumps of small trees, and green grassy patches between them. In other directions it is densely wooded, and on the eastward the trees are large. The ex-

ploration was given up in $17^{\circ} 44'$ S. lat., $124^{\circ} 34'$ E. long., the river having been traced twenty-two miles in a general S.S.W. direction, and ninety miles from the coast line. At this point, the channel of the southerly branch was found to be wholly choked with islets and sunken trees; the banks were twenty feet high, and covered with grass; partially broken or washed down, they disclosed to view a rich alluvial soil, nearly two feet deep. The trees seen were chiefly two species of palm, three of the eucalypti, stunted Banksia, acacia, and a singular tree with a rough bark like the elm, and a deep dark green foliage.

The *Buccaneer's Archipelago* consists of many islets, skirting the coast between Prince Regent's inlet and King's Sound. The land in the interior is rugged and lofty, and the shore much indented with several fine harbours. The outline of the coast about Cape Leveque itself is low, waving, and rounded, and the cliffs, as is generally the case on the north and north-west parts of Australia, of a reddish hue; but on the south of the high ground at Cape Leveque, the stoney cliffs are succeeded by a long tract which appears to consist of low sandy land, fronted by extensive shoals.

Dampier's Archipelago, and the adjacent coast, is still but partially surveyed: the shore is rugged and broken.

Depuch Island, on the north-west coast, in $20^{\circ} 37'$ S., $117^{\circ} 44'$ E., presents a singular contrast with the low, flat shores of the main land, from which it is only a mile distant. It is of a circular form, eight miles in circumference, and is composed of a vast pile of large blocks of greenstone, heaped up in rugged and irregular masses, to the height of 514 feet. It has much the appearance of basalt: here and there, near the summit, are a few stunted green trees; but, generally speaking, the island is devoid of vegetation, and very different from the other low islands of Forester's group, of which it is the chief.

From *Cape Preston*, in 21° S. lat., to Exmouth Gulf, the coast is low and sandy, and does not exhibit any prominences. The west coast of Exmouth Gulf is formed by a promontory of level land, terminating in the *North-west Cape*: from thence to the south-west, as far as Cape Cuvier, the general height of the coast is 400 to 500 feet. No mountains are visible from the coast-range.

Kok's Island, in the *Geographe Channel*, is very remarkable; nearly a table land, about a quarter of a mile in length, terminating in

low cliffs at each extremity, and on the summit of this table land are several large rocks, which look like the remains of pillars. *Bernier* island consists of sandy dunes, arranged in right lines, lying south-east and north-west—the direction of the prevailing winds. There are no trees or grass. *Dorre* is similar to *Bernier*, only the surface is higher.

Shark's Bay, and the continuous western and southern shores of Australia, will be described in the respective books of Western and Southern Australia.

I have now endeavoured to present a connected view of the tropical coast-line, including the north-east, north, and north-west shores of the island continent; a few general observations on Geology and Climate will follow an outline of the—

PROGRESS OF INLAND DISCOVERY.—It would far exceed the limits of the present work to enter into a detail of the toilsome and perilous explorations of the brave adventurers, who, at the imminent hazard, and, in too many instances, at the sacrifice of their lives, have acquired the yet imperfect information we possess concerning the interior of this vast continent. It must therefore suffice to enumerate the most important of these expeditions; dwelling more especially on those which have led to practical results. From the very commencement of the settlement at Port Jackson, strenuous endeavours appear to have been made by the colonists to penetrate beyond the mountain-belt, already described as forming the leading feature in the physical aspect of Australia. The efforts of Messrs. Bass, Caley, Barrallier, and others, were totally ineffectual, and the formidable barrier remained unpassed until the year 1813, when the country was visited by a fearful drought; the land from the sea-coast to the base of the hills was burnt up; the secondary water-courses entirely failed, and the cattle, hemmed in on all sides, died in great numbers for want of pasturage. The colonists were in despair, when three enterprising individuals, Messrs. Blaxland, Wentworth, and Lawson, united in making one more attempt to find a pass over the *Blue Mountain ranges*. They ascended the mountains near the Grose River (a tributary of the Hawkesbury), and by keeping steadily in view the fall of the waters into the Warra-gumba, on the one side, and into the Grose, on the other, which no previous explorer had thought of doing, they maintained their position on a main range, and notwithstanding

its intricate windings, eventually penetrated to a distance of twenty-five geographical miles, due west from the Nepean river to a terminating point in those mountains, whence the eyes of the enterprising adventurers were gladdened by the prospect of a grassy and well watered vale, extending apparently some miles to the westward. On their return, Mr. W. Evans, the assistant surveyor, was despatched by the same route, and the Downs of Bathurst, the river Macquarie, and the Lachlan were shortly afterwards discovered. In the following year a practicable line of road was constructed, by convict labour, over precipitous ridges, some parts of which rise 3,400 feet above the level of the sea. In the winter of 1817, an expedition headed by captain Oxley, then surveyor-general, and including Allan Cunningham, was sent to trace the Lachlan. Its long and tortuous course, during which it was not found to receive a single tributary, was followed through a flat inhospitable country, beyond the westernmost range of hills, to an interior, a dead level, forming a chain of plains, which appeared alone bounded by the horizon, whose ample surface bore evident proofs of being, in seasons of continued rains, extensively inundated. Over these Australian steppes Captain Oxley made his way, notwithstanding the slimy nature of their surface, and the distressed state of his horses, for about 100 miles to the westward of the last hill-like undulation of that part of the interior, when his progress was arrested, in 144° 30' E. long., by impassable morasses, the river having divided itself into several small channels, and its waters having become perfectly stagnant and unfit for use. In 1818, Captain Oxley started to explore the Macquarie downwards from Wellington Valley, but his persevering research was again attended with disappointment, the river being traced to a low marshy interior, where the country became "perfectly level," and the flooded river eluded further pursuit by spreading its waters far and wide. Into this expanse of shoal water captain Oxley descended in a boat, amidst reeds of such height, that having totally lost sight of land and trees, he was compelled to return to his party, whom he had left encamped on Mount Harris, a detached hill on the river's bank, elevated about 200 feet above the plain of the neighbouring flats. It being at that time perfectly impossible to penetrate the apparently unbounded morass, captain Oxley, unable to proceed in a westerly direction, determined to prosecute his discoveries east-

erly, in the parallel of $31^{\circ} 15'$, in which latitude his examination of the river had terminated. In his progress easterly, Liverpool plains, and a hilly, picturesque, and well watered country, were discovered. The expedition reached the coast at Port Macquarie, in $31^{\circ} 30'$ S. lat., and proceeded thence along the shore to Port Jackson. In the course of his journeys in 1817-18, captain Oxley advanced upwards of 500 miles beyond the Blue Mountains, and experienced one of the peculiar dangers attendant on Australian explorations, namely, the rapid rush of water from the mountains after heavy rains. In some instances the river column advances with terrific fury, sweeping every thing before it, and presenting the appalling prospect of a moving cataract, with an elevation of twenty to forty feet. Captain Oxley and his party were nearly overtaken by one of these inundations, but were providentially saved by being in the vicinity of a hill. Had he been near the margin of a stream, or in one of the vast savannahs, nothing could have preserved the gallant officer and his companions from destruction. — (*Vide* Allan Cunningham's paper in the *Geographical Society's Journal*, 1832).

About this time (1819) the Murrumbidgee was discovered, and minor excursions were immediately undertaken; but the fine open country watered by that river, and now called Brisbane Downs, was not known until 1823. Towards the close of the following year, Messrs. Hume and Hovell, two enterprising colonists, resolved upon attempting the exploration of the extensive and unknown tract of country situated between the colonized territory and Bass' Straits. They started from a stock station near Lake George, with the intention of pursuing a direct course to the south-west, expecting to arrive at the coast near Western Point, but a range of mountains, connected with those of the Murrumbidgee, through which, with burdened cattle, they found it impossible to penetrate, compelled them to follow an entirely west course, until, having passed the meridian of 148° , they were enabled to resume their original direction. In 36° S. lat., the party discovered a fine stream, flowing with considerable rapidity among the hills, which, from its depth and breadth, they had difficulty in fording. To this river they gave the name of *Hume*, but it was subsequently called the *Murray*, by captain Sturt, who explored its lower course. The travellers pursued their way over an undu-

lating, grassy, and well-watered country, and crossed two other streams, which they named the *Ovens* and the *Goulburn*. At length, having advanced nearly 400 miles beyond the remotest settlements, they emerged upon a sandy beach of the sea shore, considered by Mr. Hume to be that of Western Port, but which was, in reality, the north-eastern side of Port Phillip—half a degree to the westward of the point at which they supposed themselves to have arrived. In returning home, Messrs. Hume and Hovell travelled considerably to the westward of their outward-bound track, and on a much lower level, avoiding entirely the broken, hilly country which had previously proved so harassing to their cattle.

In 1827, an expedition was despatched under Allan Cunningham, to explore the country between Hunter's River, 32° S. lat., and Moreton Bay, in 27° S. lat. Crossing the dividing range to the westward, he skirted the eastern side of Liverpool Plains, bisected (what were afterwards found to be) the tributaries of the Darling, and discovered the extensive and valuable tracts of pastoral country now known as Darling Downs, Peel's, and Canning's Plains. In the following year, Mr. Cunningham succeeded in finding a practicable line of road through the mountain chain between Moreton Bay and Darling Downs, which the extent of intractable and difficult country between those plains and the Hunter rendered of great importance. Meanwhile, the extreme drought which had now (1828) continued upwards of three years, induced the local government to attempt again to ascertain the state of the interior. An exploring party, including Mr. Hume, under the direction of captain Sturt, (the present colonial secretary of South Australia,) proceeded to Mount Harris, on the Macquarie. Upon reaching the summit of that eminence, a prospect presented itself which formed a striking contrast to that beheld by captain Oxley, from the same spot, ten years before—the extensive morass into which the surveyor-general had descended in a boat, being now transformed into “a large and blasted plain,” parched, by extreme heat, into deep and dangerous clefts. About twenty-eight miles below Mount Harris, the Macquarie was found to terminate, having no longer a continuous bed, and the plains or steppes commence; each of them having a lagoon-like channel, surrounded by high reeds which, in the rainy seasons, catch, and for a while

detain the spreading waters, until a slight declivity, giving them a fresh impetus, they arrive at a second channel, and thence at a third, until a considerable extent of country is laid under water—a space, fifty miles in length, and thirty miles in breadth, being subject to be thus deluged. Captain Sturt found another river (unfortunately for the explorers, of salt water) which he named the Darling, and whose course he traced for a considerable distance. In this expedition friendly and frequent intercourse was maintained with the natives, who were suffering fearfully from a cutaneous disease, caused by the badness of the water, and the intensity of the heat, which seemed alike oppressive to animal and vegetable life.

In 1829, captain Sturt proceeded from Sydney to explore the Murrumbidgee, and having traced it down its right bank to $34^{\circ} 25' \text{ S. lat.}, 143^{\circ} 57' \text{ E. long.}$, he there launched a boat which he had conveyed overland, and another, which, by extraordinary energy and perseverance, had been built on the spot; from thence, advancing about twelve miles to the westward, he found the morasses into which the Lachlan had been traced, drained through a “large creek” into the Murrumbidgee; still pursuing a westerly course, through a level and monotonous country, a week’s difficult and dangerous navigation was richly rewarded by the discovery of the junction of the diminished waters of the Murrumbidgee with “a broad and noble river,” which he named the Murray, and commenced exploring; after following it in a westerly direction for about a hundred miles, the expedition arrived at a third confluence formed in $34^{\circ} \text{ S. lat.}, 141^{\circ} \text{ E. long.}$, by a river flowing from the northeast, which notwithstanding the freshness of its waters, captain Sturt considered could be “no other than the Darling.” Still pursuing the course of the Murray, captain Sturt passed another of its tributaries, which he named the Lindesay, and describes as a considerable stream, flowing in from the southeast. At length, after some intricate navigation, the forest-clad ridges which mark the eastern shore of the Gulf of St. Vincent became visible; the river in $139^{\circ} 46' \text{ E. long.}$ took a bend to the south, and was traced by the party to its entrance in the broad expanse of Lake Alexandrina or Victoria, which they traversed until stopped by the sand banks that separate it from the sea at Encounter Bay.

In 1831, a new impetus was given to internal exploration by the plausible state-

ments of a bush-ranger named George Clarke, sentenced to death for cattle-stealing, who, having for a considerable time taken refuge with the natives, had acquired a knowledge of their language. He declared that he had himself twice followed the course of a very large river, from the Liverpool Plains to the sea-coast; and the acting governor, sir Patrick Lindesay, was induced to despatch an expedition under the surveyor-general of the colony, then major, now lieutenant-colonel Sir T. L. Mitchell, to examine the country in a northerly direction. The result of the journey, although the convict’s report proved untrue, was in other respects satisfactory, Major Mitchell having discovered the Darling to be a *fresh-water* river in $29^{\circ} \text{ S. lat.}$, where it receives the Nammooy, a fine stream watering an open pastoral country, but beyond this point, the murder of two men by the aborigines, and the seizure of provisions, prevented the expedition from exploring. In 1835, major T. L. Mitchell proceeded about 300 miles up the river Darling, in a direct line. He found the country in general “unfit for any purpose,” with the exception of “a strip of land near the river;” to the westward it resembled a desert. On the return of the expedition, by the dried up channel of the Bogan, in whose ponds, however, water was occasionally found, Mr. Richard Cunningham, having diverged from his companions, fell into the hands of the natives, by whom he was barbarously murdered. In 1836, Sir Thomas Mitchell, with a view of reaching the same point on the Darling which he had quitted the previous year, followed (in order to avoid the hostile tribes he had then encountered,) the empty bed of the Lachlan to the Murrumbidgee, and thence to the Murray, which he traced to its junction with the river rightly supposed by captain Sturt to be the Darling, which latter stream he examined sufficiently to identify. He then turned to the south, and tracing the course of the Murray upwards, discovered between it and the sea a fine, open, uninhabited, and well-watered country, averaging in extent 400 miles from east to west, and 250 from north to south, which he named Australia Felix, and in which the flourishing colony of Port Phillip, or Victoria, is now established. In 1837–8, lieutenant Grey (now governor of New Zealand,) and lieutenant Lushington undertook the examination of the country about Prince Regent’s inlet, hoping to discover, in the vicinity of Dampier’s Archipelago, some

river by means of which they might be enabled to penetrate the interior. Their expedition has been already adverted to in the description of the coast line, beyond which insurmountable obstacles prevented their exploring for a greater distance than sixty miles.

In 1840, useful surveys were made by Mr. Tyers between Port Phillip and the river Glenelg, and by Mr. Dixon at Moreton Bay; and, in the same year, Gipp's Land was discovered by the able geologist and indefatigable explorer, count Strezelecki, to whom we are indebted for the physical description of New South Wales and Van Diemen's Land, a work which, to quote the words of the author, "comprehends the fruits of five years of continual labour, during a tour of 7,000 miles on foot."

In June, 1840, Mr. Eyre, who had previously conducted several minor explorations, was intrusted by the colonists with the guidance of an expedition destined to attempt afresh to penetrate the interior, the plan of the intended journey being—first, to examine Lake Torrens, and then to proceed, as far as possible, in a northerly direction. Lake Torrens was found by Mr. Eyre to be completely girded by an outer ridge of sand, covered with salsolaceous plants, and with saline crusts, showing above the ground, at intervals, "the dry bed of the lake, coated completely over with a crust of salt, forming one unbroken sheet of pure white, and glittering brilliantly in the sun, but yielding to the foot, the bed of the lake below the surface being composed of a soft mud." The progress of the party in the intended direction was arrested, it being impossible either to cross the lake, from its boggy nature, or travel along its shores, from "the total absence of all fresh water, grass, or wood, whilst the very saline nature of the soil in the surrounding country, made even the rain-water salt, after lying an hour or two upon the ground." From the dépôt near Mount Arden, close under the hills which form the continuation of Flinders' range, they therefore proceeded to their termination in 29° 20' S. lat., and reached a low and very level country, consisting of large stony plains, destitute of water, grass, or timber, varied by many small, flat-topped elevations, from 50 to 300 feet in height, composed almost wholly of a chalk substance, coated over on the upper surface by stones, or a sandy soil, and "presenting the appearance of having formed a table land that had been

washed to pieces by the violent action of water, and of which these fragments now remain."

Forcing his way through this dreary region, in three different directions, Mr. Eyre ascertained that "the whole of the low country round the termination of Flinders' range was completely surrounded by Lake Torrens, which, commencing not far from the head of Spencer's Gulf, takes a circuitous course of fully 400 miles, of an apparent breadth of from twenty to thirty miles, following the sweep of Flinders' range, and almost encircling it in the form of a horse-shoe." The extensive but disheartening prospect from Mount Serle first manifested to the enterprising party the impassable barrier by which they were hemmed in; but Mr. Eyre, considering this evidence insufficient, left his party, and proceeded, accompanied by a native boy, for about ninety miles farther, to a "low, haycock-like peak," rising "among broken fragments of table lands," similar to those previously seen near the lake to the north-west, which, naming Mount Hopeless, he ascended, and found his previous conviction entirely confirmed. He then returned to Port Lincoln for supplies, and, rejoining the party, (whom he sent forward to Streaky Bay,) set out to follow the coast line in a westerly direction, hoping to arrive at a practicable country to the north. In this, however, he entirely failed, although he succeeded in penetrating, accompanied by a native boy and a man driving a dray laden with provisions, within twelve miles of the head of the Great Bight, through low, flat lands, or a succession of sandy ridges, densely covered with a brush of eucalyptus dumosa, salt-water, tea-tree, and other shrubs, with, here and there, a few isolated patches of open, grassy plains among the scrub, but no surface-water—not a water-course or pool of any description. This attempt cost the lives of the three best draught horses of the expedition, from fatigue and privation: but Mr. Eyre resolved to make another, taking with him only one of the native boys. He thus describes the sterile region they encountered:—

"Upon rounding the head of the bight, I met with a few friendly natives, who shewed me where both water and grass were to be procured, at the same time assuring me that inland there was neither fresh or salt water, hills, or timber, as far as they had ever been; that there was no more (either fresh water or grass) along the coast for ten of their days' journeys (probably 100 miles) or where the first break takes place in the long and continuous line of cliffs which

extend so far to the westward of the head of the Great Bight. Upon reaching these cliffs, I felt much disappointed, as I had long looked forward to some considerable and important change in the character of the country. There was, however, nothing very remarkable in their appearance, nor did the features of the country around undergo any material change. The cliffs themselves struck me as merely exhibiting the precipitous banks of an almost level country, of moderate elevation (300 or 400 feet), which the violent lash of the whole of the Southern Ocean was always acting upon and undermining. Their rock formation consists of various strata, the upper crust or surface being an oolitic lime; below this is an indented concrete mixture of sand, soil, small pebbles, and shells; and beneath this appear immense masses of a coarse greyish limestone, of which by far the greater portion of the cliffs are composed; and immediately below these again is a narrow stripe of a whitish or rather cream-coloured substance, lying in horizontal strata, but which the impracticable nature of the cliffs did not allow me to examine. After riding for forty-five miles along their summits, I was in no case able to descend; their brinks were perfectly steep and overhanging, and in many places enormous masses appeared severed by deep cracks from the main land, and requiring but a touch to plunge them into the abyss below. As far as I have yet been along these, I have met with no indication of any portion of them being composed of chalk. Immediately along their summits, and for a few hundred yards back, very numerous pieces of pure flint are lying loosely scattered upon the surface of the limestone. Back from the sea, as far as the eye could reach, the country was level and generally open, with some low prickly bushes and salsolaceous plants growing upon it; here and there patches of the gum scrub shewed themselves, among which a few small grassy openings were interspersed. The whole of this tract was thickly covered by small land shells, about the size of snail shells, and in some instances resembling them in shape. There were no sudden depressions or abrupt elevations anywhere; neither hills, trees, or water were to be observed, nor was there the least indication of improvement or change in the general character of this desolate and forbidding region."

Mr. Eyre now renounced all hope of penetrating the interior, and breaking up his party, resolved to proceed with one man (who had acted as overseer) and the native boys overland to King George's Sound, which, after extreme perils and fatigue, borne with a cheerful endurance beyond all praise, he succeeded in reaching, accompanied by one only of the boys, the others having deserted him, while the unfortunate overseer had perished by the hands of the natives.

Passing over the interesting excursions of Mr. Frome to Lake Torrens, Messrs. Russell down the Condamine, and others, we arrive at the remarkable expedition conducted by captain Sturt, who left Adelaide in August, 1844, and started up the Darling with a view of tracing the Williorara (Laidley's Ponds) upwards. Instead of a mountain stream, the

Williorara proved to be a mere creek, conveying the backwaters of the Darling to Lakes Cawndilla and Minandichi, and his hopes of gaining entrance to the north-west interior along its banks were completely frustrated. The conduct of the natives at this place was very gratifying, and appears to have been chiefly owing to the favourable impression made by Mr. Eyre during a previous journey up the Darling. "To those exertions," says captain Sturt, "more than to our own prudence, must we ascribe the peaceful manner in which we have passed through the tribes." The aborigines warned captain Sturt most emphatically against attempting to cross the formidable ranges bordering the interior; telling him that they were covered with sharp pointed stones and great rocks, by which if they escaped being crushed, and gained the low country, they there would all perish from the heat and the want of water; moreover, they would find no wood to light a fire with—no grass for the cattle. This appalling picture which (allowing for their exaggerated mode of expression) experience proved to be in many respects correct, did not deter the gallant band, and having succeeded in discovering a practicable pass, they descended into the sterile region, beyond which the most strenuous and continuous efforts failed in enabling them to penetrate. Speaking of the dreary heights by which they were encircled, captain Sturt says, "they seemed to extend in a N.N.W. and S.S.E. direction, forming semicircles, like bays, and having all the appearance of a coast-line. Some prickly acacias in full blossom, a tree resembling a banksia, and a new polygonum, were found on the western slope." The expedition encamped in a sheltered glen on the 27th January, 1845, in 29° 40' 14" S. lat., 141° 30' E. long., and the tents were not again struck until the 14th of July following. They were fortunate in having here discovered an important creek, whose plentiful supply of water alone enabled them to remain so long in the heart of the desert. The sufferings endured by the whole party were excessive, and in July, Mr. Poole (the second in command) sank under them. The excursions made by captain Sturt in all directions, during his protracted sojourn in this "weary land," are too numerous to be even briefly detailed, but the following extracts from his despatches may afford the reader some idea of the dreary wilderness itself, and the perils and fatigue therein encountered:—

"We passed over a country of alternate sand hill and flats, until I struck upon a creek, beyond which the country was more open, and more subject to floods; we crossed over extensive plains, subject to deep inundations, but soon again got on sandhills. From them we descended to a stony plain of boundless extent, on which the horses left no track, and where no object was visible on the horizon from which to take bearings. Crossing these, we descended to flats, like a ploughed field, on which water had subsided, stretching to the north-east and south-west, farther than the range of vision, and without a blade of vegetation. From this we again ascended sand ridges, of most formidable description, and found the country to the west so bad where we attempted to penetrate in that direction, and surface water so scarce, that we were obliged to turn to the north at fifty miles, with only two small puddles to depend on. I struck a creek which I traced up sixty miles, when I got on a country of salt formation, covered with samphire, and other salsolaceous productions, with numbers of dry beds of lagoons, all white as snow, with salt. Passing this, we once more found ourselves among sand ridges, perfectly insurmountable, so close that the base of one touched the base of another—the whole country sand. The sand hills were of a fiery red, and they ran for miles and miles, in parallel rows, with points like the vanishing points of an avenue. But there was neither grass nor water to be found, and after trying all points of the compass, I gave it up and returned to the depôt, after an absence of seven weeks, and a ride of 924 miles.

"The men were all knocked up, and the horses perfectly leg-weary; but I was dissatisfied with this journey, and there was but little time for hesitation. Therefore, after giving the animals six days' rest, I left the camp, taking with me two men and nine weeks' provisions, my objects being to try to enter the tropics, to ascertain if there were any water between me and the north coast, or if the desert extends to the very tropics. I went due north, and struck a most splendid creek at 123 miles from the depôt. Here I had a thunder-storm that lasted half an hour, and left some surface water, dependent on which, I crossed it, and ran out 170 miles without finding a single channel for conveyance of water. I dug five wells, but had little hope of benefiting from them. I was at length brought up by a stony desert, that stretched before us in absolute boundlessness. Where there were sand-hills in it before, the sand-hills were now covered with stone, similar to the plain itself. I was in the centre of a dark and adamant sea, without any object by which to steer my course. I was forty-one miles advanced in this gloomy region, and fifty-two from water. My horses had already been one day without water, and I could not hope to reach the other water under a day and a-half, including part of the night; yet I hesitated to turn back. It was an irresistible influence that drove me back, certainly contrary to my own inclinations. I was well-nigh too late. I lost three horses, but that was of no consequence on such an occasion. I got back to the creek, (Cooper's Creek) after having reached latitude 25° 45', and longitude 139° 13'.

"From the creek on which I was, I had seen high and broken ranges to the north-east, and I now determined on examining them and the creek. I therefore went up the latter 120 miles, but I found that it was leading me away from the ranges, and I ultimately got to its termination, or rather head, in

some extensive plains. The creek was as large as the Darling, and was flanked by a box-tree forest, in grassy land, to a considerable distance from its banks. Here I fell in with a numerous population, passing three or four small tribes every day; but the news of our kind treatment of them had spread through the country, and they evinced no alarm, but did all they could to serve us. From this point I turned westward, and taking up a branch creek, went towards the ranges; but I got into a terrible country, and found that the effects of refraction had deceived me with regard to the ranges, and that they were nothing but masses of sand or rock, 300 to 500 feet high. I saw that I was getting near the scene of the greatest turmoil, where the water passed over this dreary waste, and left the shivered fragments of mountains behind it. Here, again, water and grass failed me, and I was forced to abandon this trying task, being unable to contend against the season and country. I had done all that I could do, and had run the risk of being altogether cut off; indeed, so near was it, that I drained the last drop of mud—for it was not water—out of a pool that four weeks before was 150 yards broad, and 200 to 300 long. I lost two horses, and regretted them very much. I reached the depôt, at length, having ridden 843 miles in five weeks, less three days.

"I had been exposed for twelve weeks to an excessive heat, had had insufficient food, had drunk loathsome water, and at length my iron constitution, under disappointment, anxiety, and weakness, gave way. The day I made the camp, I was eighteen hours on horseback; and when I dismounted, the spasmodic action of the muscles of my thighs was so violent as almost to throw me forward. I had, in truth, ridden all day in great pain. The next day, the scurvy, latent in me for eleven months, seized me. The muscles of my thighs contracted, and I was laid prostrate."

The expedition on their return were joined by a relief party at the junction of the Williorara, and reached Adelaide on the 19th of January, 1846. In a brief summary of the information he had obtained, captain Sturt says:—

"The principal features of the interior are the sandy ridges or dunes, by which it is traversed from south to north, and the Great Stony Desert. That the whole region traversed was once submerged, there cannot, I think, be a doubt. Its salsolaceous productions, its sea-level, its want of trees of any size or growth, excepting on the banks of the creeks, sufficiently attest this; but whether the sandy ridges were thrown up simultaneously, or were successively formed by the joint effect of winds and a gradually retiring sea, or of winds alone, it is impossible to say. When I first crossed the Stony Desert, it appeared to me to have been the bed of a former current; and I felt satisfied that that conclusion was just when I crossed it at another point more than a degree from the first, and noticed the strong proof it exhibited of waters having at one time or other swept over it with irresistible fury. Whether the Stony Desert continues to any distance I cannot say, but my opinion is that it does, and that, as the lowest part of the interior, it receives all the waters falling inwards from the coast. Whether those waters are gradually lost by evaporation, or that they are carried to some still undiscovered sea, remains to be proved; but as it is

difficult for others to elucidate these things, I have thought myself called upon to throw every light I can on the probable character of the interior. All I can say is, that after having traversed a desert for 400 miles and failed to reach its northern limit, and after having found that it continued unaltered for four degrees of longitude, I cannot hope that it speedily closes in, either to the east or west."

With regard to the sandy dunes, he adds:—

"When we first observed them, their general direction was N.E. by N., but they gradually came round to, and settled at, eighteen degrees to the W. of N., or nearly N.N.W., and preserved that bearing with undeviating regularity for more than 300 miles. They occasionally ran for ninety miles without any break in them, and occurred in lines rising parallel to each other, at greater or less distances apart, and were divided by long flats."

During the weary months spent by captain Sturt and his brave party in this stony prison, an exploration of a very different character, and attended by very different results, was made by Dr. Leichardt, an intelligent and enterprising German, who, accompanied by seven persons, quitted Jimba, the farthest station on the Darling Downs, on the 1st of October, 1844, and after a toilsome and perilous journey of 1,800 miles' distance, during which above 3,000 miles were traversed in fourteen months, arrived at Port Essington with his party, excepting only the unfortunate Mr. Gilbert, who was killed by the natives when the expedition had nearly reached the north coast. The party followed the range of mountains which run nearly parallel to the east coast, until they reached the Gulf of Carpentaria, thence followed the coast to the westward, quitted it where it turns to the northward, and proceeded direct across the country. For the greater part of the journey they lived on dried beef, and such game as the country afforded: their sufferings and endurance were very great. In a series of lectures delivered by Dr. Leichardt in Sydney, he stated that in describing the country, according to its conformation and surface, the nature of its soil and vegetation, its supply of water, and its meteorological relations, the whole line of route might be divided very naturally into eight sections, each bearing a peculiar character. By this division it may be well to abide in the following account of the country.

The first section comprises the country between Darling Downs and Peak Range, with the Dawson and the Mackenzie, and is principally composed of sandstone, broken in several localities by basalt (whinstone) which forms either peaks, as Mount Aldis and

Mount Nicholson, or the spine of large ranges, as Expedition Range. The sandstone ranges are remarkable for their numerous and steep gullies, and for their scrubby vegetation. Dr. Leichardt found the country, with a few exceptions, well watered, and almost daily thunder storms cooled the air during the months of October, November, December, and January. Not only the high level land west of Darling Downs, which sloped almost imperceptibly to the southwest, but the valleys of the rivers and the sides of the mountains are covered with extensive scrub, principally composed of a species of acacia, which has received the name of bricklow (brigalow) from the squatters between the Severn and the Condamine. This shrub, or small tree, has a foliage of greyish-green colour, and grows so close, that it is impossible, or only with extreme difficulty, that a man on horseback can make his way through it. Along the hills which bound Palm-tree Creek and the Dawson at their junction, this scrub surrounds the Downs, which are frequently several miles in extent, and are rendered extremely picturesque by small copses of bricklow, fusanas, and baubinia scattered over them, and often clustered round stately bottle-trees, the shady retreat of kangaroos and wallobis. These downs and plains are covered by various grasses and herbs; but the great prevalence of vervain induced Dr. Leichardt to name them the Vervain Plains. Looking from an eminence at the north-west side of Expedition Range, Dr. Leichardt describes the disheartening prospect of a valley nearly boundless to the eye, filled by an "almost uninterrupted sea of scrub," but the upper part of the Dawson—Palm-tree Creek, with its swampy lakes, its fine flats and noble palm-trees; part of Robinson's Creek, the Creek of Ruined Castles, and the country south-east of Expedition Range, he speaks of as so many places of rest and enjoyment, where the drooping hopes of the party brightened, and their energies revived. The banks of the Mackenzie, so far as they were traversed during this expedition, partook of the scrubby character of the country, but Dr. Leichardt saw reason to believe that the scrub ceased a little lower down, while its large supply of water led him to suppose it formed a considerable stream towards the sea-coast. The natives, when questioned concerning the course of the river, pointed to the north-east, and it probably disembogues at Broad Sound, in lat. 21° 30'. The country south-east of

Expedition Range, between Zamia Creek and Erythrina Creek, was found to be for a considerable distance to the eastward flat and openly timbered; affording good pasturage and tolerably well provided with water at the foot of the range. Its latitude was $24^{\circ} 50'$, but the course of its waters appeared to be directed either to Port Curtis or to Keppel Bay. Should a practicable communication with the sea-coast be discovered, there is little doubt of this district becoming valuable for pastoral purposes, and that even the good country of Castle Creek, Robinson's Creek, and Palm-tree Creek, will be accessible from this side.

The second section, comprising Peak Range, the Isaacks, and the Upper Suttor, presents a very different character from that just described. A long range of noble peaks, composed of dolomite, extends far to the W.N.W., and offers to the west and south-west a wide view over basaltic plains and open downs, alternating with low and openly-wooded ridges. To the eastward of those peaks, basaltic ridges, with gently undulating outlines, narrow plains, and abrupt sandstone ranges, form numerous valleys, along which creeks descend to the eastward, winding in their lower course through an immense level country, and joining the Isaacks, which comes from the north-west, and forms the chief outlet of the waters to the sea. An open forest covers the whole district, with the exception of some narrow belts of scrub along the Isaacks, and on the sandstone ranges; and the most luxuriant grass clothes not only the black soil of the basaltic plains, but the stiff flats and the sandy bergs along the creeks and river. The supply of water was found to be so little in proportion to the number or size of the channels, that on the magnificent downs of Peak Range, Dr. Leichardt and Mr. Calvert nearly perished for want of water. It was here, also, that they felt, for the last time, a hot wind from the west and south-west, coming from the yet unpenetrated interior. Water-holes existed, however, in the upper part of the eastern creeks, and swampy lagoons seemed to become numerous down the Isaacks, which is supposed to join the sea in Broad Sound, near the Mackenzie. The Upper Suttor partakes of the character of the Isaacks, from the head of which it is far more accessible than from its own lower course. Numerous flocks of emus roam over the beautiful country at the head of the Isaacks and the Suttor, and the immense tract

which spreads out round the foot of Coxen's Peak.

The third section, comprising the Lower Suttor, the Burdekin, and the country between the Burdekin and the Lynd, is characterised by its supply of running water, its primitive rocks, its limestone, its numerous ranges, and fine, open, well-grassed forest. Dr. Leichardt says, that several (comparatively) large tributaries, as the Cape, the Clarke, the Perry, drain, in all probability, extensive tracts of available country, while the elevation on the upper course of the Burdekin, renders the climate cooler than might be expected from the latitude. The basaltic table-land is exceedingly rich and beautiful. The open forest of narrow-leaved iron bark and box, on a sound and rather stony ground, alternates with plains of various extent, abundantly grassed, and watered by numerous brooks and springs. Large and deep lagoons lie scattered over the valley, or parallel to the river, whose course runs strongly over its sandy, pebbly, or rocky bed. But the approach to this interesting country is intercepted by a very mountainous region, and by deep creeks, over which more practicable roads will no doubt be found in the progress of colonisation. The basalt appears to have been broken by a still more recent eruption of lava, which expanding partly over it, has formed as wild and irregular fields of rock as ever covered the slopes of a volcano.

From the ridges and mountains which rose above the table land, the waters descend not only to the valley of the Burdekin in a south-east direction, but also to the north-east and to the westward. The country along the creeks is open and flat, so long as they pass over the table land; but when they descend their channels deepen, their banks become surrounded with steep ranges, and their beds are either formed by solid rock or covered with loose shingle and boulders, which render it impossible to travel within or along them.

The fourth section embraces the Lynd, the Mitchell, and the east coast of the Gulf of Carpentaria. The fall towards the level country, which forms a broad belt round the Gulf, is much more rapid than the ascent from the east coast; and the course of the Upper Lynd is much more mountainous and wild than that of the Upper Burdekin. The same succession of rocks, granite, talchiste, porphyry, and sandstone, are observable in descending to the Gulf, as at the east coast in ascending the table-land, but limestone was not met with (by Dr. Leichardt) on the

west side of York peninsula, though it appeared extensively developed on the Burdekin. Basalt has broken through the various rocks, but the level country is formed of a clayey ironstone, intermixed with grains of quartz, which extends all round the Gulf to Port Essington, and may be considered of newer formation. The Lynd was found to be joined by several running creeks, and well supplied with water during its whole course. The country was openly timbered and well grassed; and at the lower part of the Lynd and parallel to the Mitchell, very large and deep ponds were discovered, around which the pasture was particularly rich. The rivers within the tropics are almost all remarkable for the immense width of their beds, which are filled with sand, with the exception of those spots on which the naked rock crops out, and are often over-grown with small trees, whose number and size depend upon the frequency and strength of those volumes of water which occasionally sweep down. That of the Upper Lynd, for instance, was found to be covered with trees, whilst the bed of the Mitchell was entirely free from them, and water-marks were observed above the level of the bed—showing that a large body of water flows down to the sea in, perhaps, unusually rainy seasons.

Large tracts of country on the east coast of the gulf are covered with box (a species of eucalyptus), and with a small tea-tree with broad lanceolate leaves. The finest and most available land lies along the creeks and rivers; the soil is there much lighter, and the blood-wood, the leguminous iron-bark, and the pandanus, grow well on it, forming an open forest. All the rivers of Australia have lines of holes and hollows parallel to them, which are generally filled by high floods, and keep the water much longer than the rivers themselves. Lagoons of this description are numerous along the Staaten, the Van Diemen, the Gilbert, and the Caron, and appear to be constantly resorted to by the natives. To the north of the Staaten, towards the sea-coast, there is a succession of plains, but the grass is generally stiff and wiry. If we compare the course of the rivers on the east coast of the Gulf of Carpentaria, it will be considered remarkable that the Lynd, which rises in the latitude of the head of the gulf from the table land of the York Peninsula, should go to the N.N.W. and belong to a system of waters which joins the sea in 15° S. lat., instead of taking a direct course to the west, and disemboguing

in or near the head of the gulf. A number of coast rivers, of probably very short courses, the Nassau, the Staaten, the Van Diemen, Gilbert, and Caron, take their origin from the moderately elevated country which bounds the valley of the Lynd and Mitchell to the westward.

The fifth section comprises the Plains of Promise, so called by captain Stokes, which extend from the Flinders to the Nicholson, and are drained by the tributaries of three large salt-water rivers or creeks, the most westerly of which is the Albert of Stokes, and the Maet Suyker of the Dutch navigators. These plains Dr. Leichardt found covered with various tender grasses and herbs, interspersed with a few straggling trees. The narrow valleys of the creeks were filled with open scrub, formed by a small tree, whose fresh-cut wood has the odour of raspberry jam.

The sixth section of Dr. Leichardt's journey between the Nicholson and the Roper, is remarkable for the number of large, salt-water rivers, the density of its tea-tree scrubs, and the extent of its stringy-bark forests. Here, again, are hills and ranges, while pebbles of granite and porphyry indicate that the great arc of high land which sweeps round the head of the Gulf of Carpentaria approaches the sea-coast. The Van Alphen, the Abel Tasman, the Robinson, the Macarthur, and the Limnen Bight River, form broad channels of water, and occasionally afford magnificent prospects, especially cheering to eyes wearied by the monotony of the dense scrub.

The seventh section lies between the Roper and the high land of Arnhem's peninsula. The Roper is a large fresh-water river, fed by a great number of running creeks and brooks, all closely fringed by belts of pandanus. Almost the whole country along the river is open, well grassed, and available for depasturing purposes. At its upper course fine plains, bound by sandstone ridges, and diversified by pandanus creeks, form an extremely pleasing landscape. The high land is covered with an open, stringy-bark forest on a sandy soil; but its level is frequently interrupted by steep rocky sandstone hills and ridges, at the foot of which tea-tree swamps, with a peaty soil, form frequently the head of creeks. The fall of the high land of York peninsula is more sudden to the westward; the same is the case, in a still higher degree, in Arnhem's Land; for there is not only a very rapid fall in the

creeks, but there are precipices from 500 to 800 feet high, bordering the valley of the South Alligator River, over which numerous cascades rush down to join their waters with those of that river. It is remarkable, that the only slope which allowed the explorers to descend into the valley was formed of granite, whereas the whole of Arnhem's Land, and the ranges of the Roper, are composed of sandstone, which, near the divisions of the waters of the Gulf of Carpentaria and the north-west coast, has been broken through by basalt.

The eighth, and last section comprises the two Alligator rivers, and the Coburg peninsula. Its leading features are large swampy lagoons, extensive plains at the lower part of their course, densely-wooded ironstone ridges, and a great number of creeks in the Coburg peninsula, with limited flats of light alluvial soil, richly clothed with herbs and grasses during and immediately after the rainy season. These creeks generally enlarge into swamps, called "Mariars" by the natives, before they are lost in the mangrove thicket which covers their junction with the sea.

Concerning the capabilities of the country whose leading features have been above described, Dr. Leichardt thus expresses himself:—

"To the question of how far this country is available for colonization, I would reply—the greatest part is fit for pastoral purposes, excepting only the scrubs of the east coast of Australia, the mountain gorges of the Upper Lynd, and the tea-tree scrubs of the west coast of the Gulf of Carpentaria. But even here broad belts of fine country extend along both sides of the larger rivers, and will very probably be found quite as good as the country of the Roper. Horses and cattle will do well over the whole extent, particularly at Expedition Range, along the Isaacks, the Burdekin, the east coast of the gulf, and on the plains at its head. The rapid increase of the buffaloes on the Coburg peninsula, and the excellent condition of the herd of cattle which they keep at Port Essington, show that the north-west coast of Australia is no less favourable for the development of animal life. The elevation of Peak Range, and of the table land of the Burdekin, leads me to believe that these regions are fit for sheep. I am not sufficiently acquainted with the cultivation of tropical plants to give a decided opinion, but there is such a variety of soil, of aspect, and of elevation, that I feel convinced tropical plants will grow freely where sufficient moisture exists. The cotton, the indigo, the cocoa-nut, the banana, the arrow-root, the sweet potato, the bread-fruit tree, the jack-fruit, the soursop, the pineapple, the mango, and mangostine grow well in Port Essington; and captain Macarthur assured me that, according to the statement of the Malays, who had examined the swamps west of the settlement, they would do excellently for growing rice. The large plains of the Alligator rivers would suit equally well, and to an almost unlimited extent."

A third very important exploration was undertaken during the absence of captain Sturt and Dr. Leichardt. The surveyor-general, Sir T. L. Mitchell (whose former journeys have been briefly noticed), started from Sydney with a well-equipped expedition, in December 1845, one chief object being "the discovery of a good practical line of road to the nearest part of the Indian Ocean to the westward of Torres Straits, toward the Gulf of Carpentaria." The season was unpropitious by reason of great drought, and the intended route by the Bogan was found to be impracticable, from the scarcity of water in its channel. The intense heat killed all the Kangaroo dogs, most of the party were afflicted with ophthalmia, and the draught oxen were so much distressed that some of them dropped dead on the journey. A fortnight's halt was made at the ponds of Cannonba, between the Bogan and the Macquarie, during which time some refreshing rain fell, and from thence the expedition journeyed along the left bank of the Macquarie, and skirting the western limits of the marshes, proceeded to its junction with the Darling in 147° 33' E. long., 30° 6' 11" S. lat. While tracing the attenuated channel of the Macquarie among the reeds, where water, though scarce, was still to be found in ponds, Sir Thomas was startled by the report that "a flood was coming down from the Turon mountains, but that it travelled slowly and would not arrive until the following evening." At the time stated, a murmuring sound, like that of a distant waterfall, was heard, mingled with occasional cracks, as of breaking timber; very gradually the noise increased, until at length the flood burst into sight, glittering in the moonlight, and filling the dark and dry bed of the river with water brought a distance of 400 miles. Sir Thomas, after a graphic description of this singular spectacle, adds—"We thought then that there was an end of all our troubles, but in a few days after, in the same channel, we were just as badly off for water; that water had gone to fill thousands of lagoons, and never reached the channel of that river to which it was a mere tributary." Crossing the Darling, the party succeeded in reaching the swamp in which the Narran terminates; tracing that stream upwards (or northwards) to its junction with the Balonne, in 148° 25' E. long., they found it full of water and increasing in size and importance as it was ascended, with grass or the very best description on its banks. Pani-

cum lævinode (barley grass), the seeds of which, bruised between stones and baked into cakes, constitutes the chief food of the natives; and *Anthistirium Australis* (Kangaroo grass) grew on the plains in the open forests.

The banks of the Balonne minor seemed thickly peopled with friendly natives, who assisted the party in finding a way for the carts among the numerous lagoons, and guided them across the Culgôa. "From thence," says Sir Thomas—

"I travelled to the upper Balonne, with the intention of proceeding northward along its right bank. That great river is there at its maximum, and is only inferior to the Murray in breadth and depth. Lower down it separates into various channels—the first branch being the Culgôa, falling into the Darling, about thirty miles above Fort Bourke—the remainder, or minor Balonne, again spreads its waters into the Narran, the Bokhara, the Ballandoola, and the Biree; the latter three, I believe, again unite, and fall into the Darling forty or fifty miles above Fort Bourke. Tracing the Balonne upwards, I found the country on its banks well covered with good grass, and we encountered only a small proportion of scrub. Some of the reaches were so broad, deep, and extensive, that I could not suppose this river contained only the waters of the Condamine, and I therefore expected to meet with some tributary from the north-west. On arriving at a natural bridge of rock, in 148° 46' 45" E., 28° 2' S., I selected a position commanding access to the other bank, and formed there a dépôt, with a small party, examined the country to the north-west. I first made a reconnaissance north-west by compass, and found in that direction, at the end of thirty miles, a poor, sandy, unpromising country."

Returning to the dépôt camp, Sir Thomas proceeded up the river, and followed the Cogoon, a small tributary from the north-west, through a beautiful country, until it led him among some hills, from whence he was enabled to form more extensive and accurate surveys. From Mount Abundance, a double-topped hill, in 148° 40' E. long., 26° 39' 30" S. lat., so named from the abundance of good pasturage around it, Sir Thomas looked on the finest country he had ever beheld in a primeval state. A champagne region, spotted with wood, stretching as far as the eye or even the telescope could reach, intersected by river lines from the north. A noble mountain mass arose in the midst, sufficiently elongated in a south-west and north-east direction to deserve the name of a range in about 142° 2' E. long., 26° 23' 32" S. lat. To the mountains were given the name of the Grafton Range, and to the surrounding country that of Fitzroy Downs. The sources of the Cogoon were found to arise between the three isolated mountains of Abundance, Bindyego, and Bindango, the

latter being connected by a low neck of grassy downs, with small knolls of trap-rock, to one of the masses of coast range in which the Balonne appeared to have its source. Northward from Bindango, other waters fall to the north-west, and in the remote distance one gap was perceived in a tabular sort of rocky country, through which it was hoped the water course would lead; but in following it down, this promising little river (the "Amby" of the natives) turned to the southward of west. The gap, however, formed a convenient pass, and was moreover a very remarkable opening, containing several conical hills, on which many strange shrubs were growing; one of the hills was composed of basalt.

The country through which the opening led consisted in general of sandstone; southward and back from the pass much good open forest land appeared around. In the country beyond, some smoke which arose in the woods excited the hopes of the surveyor-general, and following in the direction thus indicated, he came "upon a river fully as large as the Darling," called by the natives the "Maranoa." To the westward and northward of the sandstone ranges, lay a well-diversified country, with abundance of grass, some water, and finely-shaped hills, in groups, and also detached cones. But the river leaving that lower country, forced its way among rocky cliffs, where its course was traceable by the open ground along its banks, to be steadily south-west, receiving, of course, the river "Amby," which had turned also in the same direction. Sir Thomas traced the Maranoa upwards, and found that two tributaries joined it from the west, but they arose in subordinate sandstone ridges, and contained little water, while the main channel was dry and full of sand, water being less easily found there than in the sandstone gullies by which it was there enclosed. From Mount Owen (a cone in the range before mentioned,) the main channel of the Maranoa is visible coming through this range from mountains beyond it. Of these mountains the most lofty part, being remarkable for its extreme flatness, was named Buckland's Table Land. The account given by Sir Thomas in his despatches, of the discovery of valuable land made at this period of the expedition, is very interesting:—

"Continuing my ride to the north-west," he says, "I again found a chain of volcanic summits connected with a mass of table land which I named (finding

none of the Aborigines there,) Hope's Table Land. Between it and the still higher range towards the coast lay a very broken sandstone country, which was difficult to pass through with carts; but when I had at length discovered, beyond Hope's Table Land, the head of another promising river falling to the north-west, we soon found a way, through which my indefatigable party led the carts and bullock-team without the least damage. Mount P. P. King, a pointed volcanic cone, in long. $147^{\circ} 37' 40''$ E., lat. $25^{\circ} 9' 10''$ S., is near the head of that river, which we followed down until it turned, as all the others had done, to the south-west, and I was again obliged to halt, and take a long ride to the northward, where another chain of summits extended westward nearly under the 25th parallel of latitude. Beyond that range, whose summits are all of trap rock, I found deep sandstone gullies; and in following down one of these, I reached an extensive grassy valley, which terminated on a reedy lake in a more open country. The lake was supplied by springs arising in a swamp at the gorge of the valley which supported a flowing stream of the purest water. This stream spread into the extensive lake, and, to my surprise, was absorbed by it, at least so as to escape through some subterraneous outlet, for the channel of the river in which the lake terminated was dry. The country is adorned by hills of the most romantic form, presenting outlines which surpass in picturesque beauty the fairest creations of the painter. Several pyramids mark the spot where the springs were first discovered. Lower down appear, over the woods, isolated rocks, resembling ruined castles, temples, and Gothic cathedrals. Others have apertures through them, and the trees being also very varied and graceful in form, and rich in colour, contribute so much to the beauty of the scenery that I have been induced to distinguish the river and lake by the name of a painter. Returning to the party, we soon brought the carts and dray down the sandstone cliffs to the banks of the Salvator, and pursued that river downwards until I discovered, which was soon obvious, that its course turned to the eastward of north, consequently that we were upon a river falling to the eastern coast. We lost two days in vainly endeavouring to pass to the westward through dense brigalow scrub, but on a ride which I next took north-westward, I was more successful, for, after forcing my way through ten miles of scrub, I came to what seemed to me the finest region on earth: plains and downs of rich black mould, on which grew in profusion the *Panicum laxinode* grass, and which was finely interspersed with lines of wood which grew in the hollows, and marked the courses of streams; columns of smoke showed that the country was too good to be left uninhabited; and, in fact, on approaching the nearest river channel, I found it full of water. This river I named the Claude, in honour of the painter of quiet pastoral scenery, and to the downs and plains, so favourable to flocks and herds, I gave the name of the Mantuan Downs and Plains. I returned to the party on the Salvator, crossed that river with it in lat. $24^{\circ} 31' 47''$ S., and conducted it, cutting our way through ten miles of scrub, to the banks of the Claude. These two rivers join at a considerable distance lower down, and form the Nogoa—a river which, according to the natives, pursues a north-east course to the sea, and therefore, probably, has its estuary on the shores or in the vicinity of Broad Sound. We were obliged to make a bridge for the passage of our carts across the Claude, and then we crossed a plain, where grass grew almost as thickly as in Australia Felix; then

another stream, also full of water, was crossed, and we ascended undulating downs on which fragments of fossil wood were abundant, in a very rich soil. Beyond these (the Mantuan Downs) a range of broken summits appeared, which we found to be the upper part of a very difficult sandstone country, wherein the beds of the gullies were at a much lower level than the downs and plains."

Westward of these the country was quite impervious, the party therefore descended by an open gently declining valley to the head of a creek, falling north-west, but Balmy Creek (so called from the fragrant shrubs growing there) soon led them to the heart of the sandstone gullies; and they were glad to find a favourable outlet to the open country by a pass, in the gorge of which stood a rock so much resembling a tower, that it was difficult to believe it the work of nature. The glen thus entered (Glen Turret) was very extensive, contained abundance of good grass, and was bounded on the east and west by very broken-topped ranges; to the northward the view was over a more distant country. Ascending the most northerly summit of the range on the west, which he named Mount Mudge, the surveyor-general perceived that the course of the river Belyando, which they had followed for a considerable distance in the hope of its leading to the Gulf of Carpentaria, turned at length from the north-west, to the north and north-east, and was, in fact, the river noted by Dr. Leichardt as joining the Suttro in $21^{\circ} 6'$ S. lat.; the party were, therefore, compelled to retrace their steps to their first camp on the Belyando, in $147^{\circ} 17'$ E. long, 24° S. lat. From three remarkable points of the range just behind, Sir Thomas resolved on renewing his search for a river running in the desired direction. These three volcanic cones, called Mounts Pluto, Hutton, and Playfair, form an obtuse angled triangle. Crossing a range of clay ironstone, covered with dense scrub, which extends northwards from Mount Playfair, he discovered the sources of the Warrego, a river flowing south-west, and on the western side followed down the head of another river, falling north-west, which he called the Nive, but which subsequently took a southerly and at length even an easterly direction. Returning disappointed, but not disheartened, Sir Thomas hastened to a gap he had noticed in a western ridge, connected with that to the northward, and ascending a naked rock to the west side of it, beheld in the midst of open plains a line of trees marking the line of a river in a north-west direction, as far as the eye could reach. For ten successive days

the delighted explorer pursued, on horseback, the course of the river, which he named the Victoria, in honour of our gracious sovereign, and found it, in some places, forming broad and important reaches, in others spreading into four or five branches, some of them several miles apart; the whole country being better watered than "any other portion of Australia" he had previously beheld, by numerous tributaries arising in the downs.

"The soil," says Sir Thomas, "consists of rich clay, and the hollows give birth to water-courses, in most of which water was abundant. I found, at length, that I might travel in any direction and find water at hand, without having to seek the river, except when I wished to ascertain its general course and observe its character. The grass consists of panicum and several new sorts, one of which springs green from the old stem. The plains were verdant; indeed the luxuriant pasturage surpassed in quality, as it did in extent, anything of the kind I had ever seen. The myall tree and salt bush (*Acacia pendula*, and *salsalæ*) are also there. New birds and new plants marked this out as an essentially different region from any I had previously explored. That the river is the most important of Australia, increasing as it does by successive tributaries, and not a mere product of distant ranges, admits of no dispute; and the downs and plains of Central Australia, through which it flows, seem sufficient to supply the whole world with animal food. The natives are few and inoffensive."

He adds—

"I crossed the river at the lowest point I reached, in a great southern bend, in $144^{\circ} 34'$ E. long., $24^{\circ} 14'$ S. lat., and from rising ground beyond the left bank, I could trace its downward course far to the northward. I saw no callitris (pine of the colonists) in all that country, but a range, showing sandstone cliffs, appeared to the southward, in about 145° E. long., $24^{\circ} 30'$ S. lat. The country to the northward of the river is, upon the whole, the best; yet, in riding ninety miles due east from where I crossed the southern bend, I found plenty of water and excellent grass; a red gravel there approaches the river, throwing it off to the northward. Ranges extending N.N.W. were occasionally visible from the country to the northward."

The diminution of supplies compelled the surveyor-general to return to the camp on the Maranoa river, where the remainder of his party had been stationed for eighteen weeks, and from thence the expedition returned to Sydney, consuming the last of their provisions on the day of their arrival. The fertile and available country thus discovered is roughly estimated by Sir Thomas Mitchell at 160,000 square miles, the soil on the banks of the Victoria being a rich black mould, producing spontaneously all the best grasses known in New South Wales, and five new kinds of excellent quality. The climate was salubrious, for it is one of the strange contrarieties partly accounted for by

the gradual rising of the land, that in proceeding towards the tropics the air becomes cooler. The coast range breaks off in the parallel of 25° at the lofty plateau of Buckland's Table Land, and Sir Thomas Mitchell considers easy access with this fine country might be found from the good harbour of Port Bowen, which has been skilfully surveyed by Captain Blackwood, R.N. The distance between Port Bowen and the head of the Salvator is 220 miles.

On the return of the expedition to Sydney, the local government despatched assistant-surveyor Kennedy to follow up the discoveries of the surveyor-general, and follow the supposed course of the Victoria River to the Gulf of Carpentaria. After an arduous journey, Mr. Kennedy traced the Victoria flowing to the westward and then to the southward, for more than one hundred miles, until a total failure of water and vegetation compelled him to abandon further research in $26^{\circ} 15' 9''$ S. lat., $142^{\circ} 20'$ E. long. His observations led him to believe the Victoria identical with "Cooper's Creek," traced by captain Sturt to $27^{\circ} 56'$ S. lat., 142° E. long., and then coming from the north-east. In $25^{\circ} 9' 30''$ S. lat., and about $143^{\circ} 16'$ E. long., Mr. Kennedy found a considerable river joining the Victoria from the north-east, which he named Thompson's River. It is possible that Mr. Kennedy may have erred in taking a wrong branch or tributary of the Victoria for the main stream, and thus been led too far away to the westward and southward, until he reached the margin of Sturt's desert. Returning to the colony, he passed through a fine country between the parallels of $25^{\circ} 55'$ and $28^{\circ} 15'$, and the meridians of $145^{\circ} 28'$ and $146^{\circ} 44'$, watered by the Warrego River, which he describes as containing "deep reaches of water, occurring at short distances, and increasing in proximity as he advanced. This inexhaustible supply of water is bounded by open forests for the first forty miles, and from thence by extensive plains thickly covered with the most luxuriant pasture, and broken here and there by clumps of *acacia pendula*. I have never seen in the colony any country which surpasses it, and but very little to equal it, either as being adapted for the depasturing of cattle, or any kind of stock." He followed the Warrego to about $28^{\circ} 25'$ S. lat., $140^{\circ} 28'$ E. long. It there divided into two equal channels, which shortly reunite, but only to form the insignificant dry bed of a water-course; the country on either side

being flat, and subject to inundation, void of grass, but thickly covered by a species of small grass and acacia. Mr. Kennedy here left the Warrego, being unable to procure water in either channel of the river, even by sinking wells, "once more disgusted and disappointed," he emphatically states, "as all travellers will ever be who put their trust in the interior rivers of Australia."

Mr. Kennedy was subsequently despatched by the local government on another exploratory journey—but has never returned to the colony, and is supposed to have perished in an encounter with the natives.

An exploration is now in progress, of which some accounts are daily (January 1850) expected. On the return of Dr. Leichardt from Port Essington, the colonists of New South Wales raised by subscription about two thousand pounds in token of their grateful sense of his important discoveries; partly with this fund, and partly by the aid of other contributions, the enterprising traveller fitted out another expedition, and, accompanied by eight persons, started from Moreton Bay in March, 1848, intending to attempt to reach Swan River by crossing the continent from east to west. The journey he supposed would occupy two years, and probably necessitate the traversing of more than 5,000 miles. Should Dr. Leichardt succeed in his meritorious attempt, the mysterious interior of Australia will at length be penetrated, and the question solved on which two leading authorities so widely differ—Mr. Eyre having steadfastly adhered to the belief that no inland sea exists; and captain Sturt still giving it as his opinion that more than one will eventually be discovered.

The foregoing brief account of a few of the most remarkable explorations in Australia, will, it is hoped, convey to the mind of the general reader, some idea of the vast and varied regions so newly trodden by the foot of civilised man. In each Australian colony, a spirit of enterprise and honourable emulation has been manifested and sustained by the colonists, which is abundantly attested by the large amount of territory, not only examined, but absolutely occupied, in the teeth of difficulties which appeared well-nigh insurmountable. I do not attempt to enumerate the long list of Australian explorers whose strenuous exertions have been productive of permanent benefit to their countrymen, and reflected honour on the land of their birth, for in doing so I might possibly omit many

well deserving most honourable mention, but I cannot close this section without paying a tribute of esteem to the gallant officers of the army and navy, who turning, as it were, "their swords into pruning hooks," have yet encountered dangers quite equalling those of the battle-field, and won unfading laurels. The melancholy fate of three individuals is too intimately connected with this subject to be passed over in silence; namely, that of captain Barker, who was speared by the natives while engaged in the cause of geographical research on the south coast; of Mr. Darke, who fell by the hands of the aborigines, in 1844; and lastly of a promising youth, the son of Sir Thomas Mitchell, who perished for want of medical aid, while surveying in winter the Australian Alps.

TIDES.—The tidal wave strikes the whole coast of Australia, from Sydney to Torres Strait, nearly at the same time, viz., at eight o'clock at the full and change of moon. At Cape Palmerston, the rise is from twenty-four to thirty feet, while at Port Bowen to the south, and at Port Molle to the north, the rise is only sixteen feet. At Port Bowen the flood tide comes from the south, while at Broad Sound and to the north, it comes from the north. On the north-west coast of Australia, about Cambridge Gulf and Buccaneer's Archipelago, there is also a limited space where the rise and fall of tide is greater than on the adjacent coasts. At Rockingham Bay, Endeavour River, and about Palm Island, there is no tide at all. At Hanover Bay, on the west coast, the highest tides occur on the fourth day of the full or change of the moon, when they attain a maximum height of twenty-five feet, while during the neaps, the difference between high and low water does not sometimes exceed twenty-four inches. Captain Stokes says that the tides in the head of the Gulf of Carpentaria appear to be a compound of many others, obliterating the common daily difference, and producing only one tide in twenty-four hours. The direction of the flood stream commences at S.S.E., changing gradually to S.S.W. as it terminates; that of the ebb changes from N.W. to N.N.E. The strength of each is from a quarter to one knot; rise at springs, nine to twelve feet; at neaps, three to eight feet. At the entrance of Van Diemen's Inlet, in the Gulf of Carpentaria, it is high water at the full and change of the moon at a quarter to seven, but in the upper part the tides are three hours and a quarter later. The length of both flood and ebb is twelve hours, and

the direction of the flood being from the northward, following the eastern shore of the gulf. There are currents from Breaksea Spit to Torres Straits; from thence it sets to the north-west, but after passing the strait it is affected by the monsoons.

WINDS.—In the tropics the real motion of the earth in an opposite direction to the apparent motion of the vertical sun westward, produces a westerly motion both in the tides of the sea and in the atmosphere; hence the origin of the "trade winds," which extend beyond the tropics into both hemispheres, and shift northerly and southerly with the declination of the sun. These winds tend more to the southward as the latitude increases, and extend farthest into each hemisphere during its summer. A great portion of the southern hemisphere being sea, the extra-tropical wind is much more regular than in the northern, but in both the prevailing wind blows in an opposite direction to the trade; hence on the south and west coasts of New Holland, the south-west wind is the most constant, and it produces an easterly current in the ocean which is felt along the south shore.*

The arid and heated surface which appears to form the interior of Australia, attracts the wind from the north coast, and it blows to the south and east in hot and violent gusts, the thermometer reaching frequently 120° Fahr. I have myself marked the thermometer at 110° Fahr. on Christmas eve in New South Wales. In the winter season, when the land begins to cool, west winds prevail on the south coast. There is no periodical recurrence of dry and rainy seasons between Cape Howe and the tropic of Capricorn, where the variations incident to the torrid zone commence. The south-east trade wind is tolerably regular for three-fourths of the year, and the sea and land breezes steady. From Torres Strait to Cape Van Diemen, the monsoons are felt in the open channel; the south-east wind blows from March or April to November; weather generally fine during the remainder of the year, when the sun is nearly vertical. The north-west monsoon is accompanied by heat, thunder, lightning, and heavy rains. The great size and peculiar configuration of the Gulf of Carpentaria has considerable influence; the south-east monsoon, which is a sea wind, brings the rainy season; the north-west, which is a land wind, brings dry weather.

The north-west coast lying between the

* *Picture of Australia.*

tropics and the east trade wind, and trending to the southward, has not so much of a tropical character, and the east monsoon which begins in April, and blows in gusts, seldom lasts longer than the end of June. The monsoon in summer (December and January), blows from the west, varying a point or two to the north or to the south. In February the west wind dies away; the weather becomes variable, with squalls and heavy rain. Currents follow the wind on the west coast; the general winds are from between the north-west and south, but generally toward the west, and near Cape Leeuwin chiefly from the south-west—in summer, often from the north-west during the night. The ocean current divides into two parts at Cape Leeuwin: one sets east along the south coast, the other north along the west coast.

On the south coast the wind is from the west during the greater part of the year, and easterly only during the latter end of summer in January, February, and March; it is then felt most at projections of the coast, viz., near Wilson's Promontory and King George's Sound.

The land wind on the north-west coast has the same dry and parching character as in New South Wales; when Captain King rounded the North-west Cape in February, and got under the lee of the land, the air which had previously been of a pleasant temperature, became so hot as to produce a scorching sensation. Towards the middle of the north-west coast, he found the temperature at noon in the shade 120° Fahr., and on land ten degrees higher. The north-west and north coasts partake of the unhealthiness of a tropical region, the atmosphere being infected by vegetable miasma. The inter-tropical parts of the east coast, possessing high and diversified land, not so subject to be flooded, and with regular monsoons, appears more salubrious. The general direction of the winds on the west and south-west, south and south-east coasts being from the sea, the temperature in summer is delightful. On the Blue Mountains in New South Wales, and on the Australian Alps in Port Phillip, snow falls in winter, and it freezes there for several months, generally in June, July, and August. Hail falls in large, irregular masses during the summer.

CLIMATE.—Excepting on the marshy shores of the north-west coasts of Australia, the climate of the whole territory is remarkably salubrious; this is proved by the good health

of the Europeans engaged in exploring expeditions even within the tropics, where they have been most laboriously employed for months, exposed to a burning sun by day, without any shelter by night but that of a tree or ledge of rock, and with very imperfect and scanty nutriment. Yet among many hundreds thus occupied, there is in the long list of sufferings from various causes no record of any one dying from fever or other pallial influences. When Dr. Leichardt proceeded on his perilous journey to the north-west, he found the land become more elevated and the climate cooler. He remarks, "The bracing nature of the south breeze at night had a very beneficial influence on our constitutions, and the regular interchange of land and sea breeze contributes everywhere to render a climate healthy." Captains Grey and Lushington on the north-west coast, after twelve weeks' toilsome exploration, did not suffer from climate disease. Neither did captain Stokes and his gallant companions experience illness during their surveys of the Victoria, Albert, Adelaide, and other rivers in tropical Australia, although absent for weeks among mangrove shores, which I know from dear-bought experience to have been so destructive to the health of those engaged in our boat river surveys in Africa, where not unfrequently the entire crew of a well-titled pinnace have perished from exposure to river exhalations during a single night.

GEOLOGY.—Facts on this interesting and important section are necessarily scanty, and insufficient to afford the materials for a general description. Mr. Jukes says, that the mountain chain on the east coast has an axis of granite, with occasional large masses of greenstone, basalt, and other igneous rocks. It is flanked on both sides by thick beds of palæozoic formations, chiefly sandstone, but also containing limestone and coal. In the north portions of the chain, Dr. Leichardt found the same formations, and especially trap and granite, near the Burdekin River. At Port Phillip there are similar igneous rocks, and on the coast tertiary formations resting on the edges of upturned palæozoic beds. In Western Australia, the Darling range consists of granite below, covered by metamorphic rocks, and between it and the sea is a plain, composed of tertiary beds. In Northern Australia, there is a great sandstone plateau, rising to 1,800 feet above the sea, and probably of palæozoic age; whilst on the immediate shore, and

round the Gulf of Carpentaria, are beds supposed to belong to the tertiary period. Captain Sturt found similar substrata in the central desert. It is probable these tertiary rocks are continuous throughout the centre of the island; and during the tertiary period, all this portion of the country was submerged, whilst the high lands on the coast rose like groups of islands from the shallow sea. Captain Sturt supposes Australia to have been formerly an archipelago of islands; and Mr. Gould is of opinion, that at some remote period it must have been divided into at least two portions, since, with few exceptions, he found the species of birds inhabiting the same latitudes of its east and west divisions, differing from, but representing each other.

This immense island appears of *diluvian* rather than volcanic origin, but different causes may have operated conjointly in its formation; after having been left partially dry by the receding of the mighty deep from the north to the south pole, some powerful submarine action, (as in the case of Chili, and other parts of America,) may have raised the crust of our globe, in this spot, above the ocean level, either at one shock, or by a series of successive shocks. But one comparatively recent active volcano is known, viz.—Mount Wingen (see New South Wales Book); but vast quantities of marine shells have been found, at various degrees of elevation above the sea, in some places imbedded in sandstone. On the east coast of Australia, this sandstone strata lies in beds, one on the top of another, in the most regular manner, their original relative situation evidently having never undergone any change. Mr. Berry, who devoted considerable attention to the subject, while admitting that the beds are not invariably strictly horizontal, contends that this may arise from a gentle yielding of the substrata. Some of these beds, though perfectly horizontal and of regular thickness, consist of thin laminæ, which incline at a considerable angle to the north-east. This sandstone is principally siliceous; sometimes, indeed, it is argillaceous, and in this state it is generally found over coal, in which situation it is soft and very decomposable. Among the coal measures, thin beds of what may be called calcareous sandstone are occasionally met with. In fact, according to Mr. Berry, the mountain ranges on the east coast of Australia, from Bass' Straits to 19° S. lat., consist, with few exceptions, of vast conglomerations

of sandstone; and he asserts, that there is no granite to be found in masses near the coast for an extent of 1,200 geographical miles. At the 19th parallel, a chain of lofty granitic or primitive mountains appears, of various elevation, forming the barrier towards the ocean for about 300 geographical miles, *i. e.* to the parallel of 14° S. lat. Here the sandstone again predominates, the land gradually dipping till it loses itself in the sea to the north, whence coral reefs extend as far as the eye can reach. Dr. Fitton, in his analysis of captain King's valuable survey, says, that between the parallels of 28° and 12° or 13° , on the east coast, granite is found; at Capes Cleveland and Grafton, Endeavour River, Lizard Island, and at Clark's Island, on the north-west of the rocky mass which forms Cape Melville; while rocks of the trap formation have been noticed, in three detached points, among the islands off the shore; in the Percy Isles, about $21^{\circ} 40'$ S. lat., Sunday Island, north of Cape Grenville about 12° , and in Good's Island, on the north-west of Cape York, in $10^{\circ} 34'$ S. lat.

Along the north and west shores, the prevailing stratum is a reddish sandstone, agreeing so much in character with that of the west of England and Wales, that specimens from the two countries can scarcely be distinguished from each other. An arenaceous cement in the calcareous breccia of the west coast, is precisely the same with that found in Sicily; and the jasper, calcedony, and green quartz approaching to heliotrope, found at the entrance of Prince Regent's River, resemble those of the Tyrol, both in their characters and formation. No limestone occurs among the specimens from the north and western shores; but it is remarkable, that recent calcareous breccia was found by commodore Baudin to exist throughout a span of no less than twenty-five degrees of latitude, and an equal extent of longitude, on the south-western and north-western coasts, and, according to Mr. Browne's specimens, on the shores of the Gulf of Carpentaria also.

This breccia would appear to be a very recent limestone full of marine shells, similar to that which exists on the shores of the Mediterranean and the West Indies. It would be an interesting geological fact, were it ascertained that a distinct line can really be drawn between those concretions of modern formation, which occur on the sea shore, and other calcareous formations very

nearly resembling them, both in the fossils they contain, and in the character of the cementing substances, that are found in several countries, at considerable heights above the sea. An illustration of this remark, indicating likewise the strata of the transalpine country of New South Wales, occurs at the limestone caves at Wellington Valley, 170 miles west of Newcastle, and 2,000 feet above the sea. Sir Thomas Mitchell, the surveyor-general of New South Wales, who discovered the cave in Wellington Valley, sent the following interesting account of it to the Geological Society, which that learned body has, with its usual liberality, permitted me to embody in these pages:—

"The rock, through which the valley has been excavated, is limestone, much resembling in external characters that of the carboniferous series of Europe. This appears on both sides of the valley, above the alluvial deposits in the bottom, and extends on the east to the height of about 100 feet above the stream. On the west of the valley, hills of greater height run parallel to the limestone, consisting of a red sandstone and conglomerate; and a range of heights on the east of it is composed of trap rocks. The basis of a tract, still further eastward, which divides the waters of the interior from that which sends its streams to the sea, is granite. The rugged surface of the limestone tract, in several parts of which the bare rocks are exposed, appears to abound in cavities, the orifices of caves and fissures; two of which, the more immediate subject of this communication, are about eighty feet above the stream of the Bell, on its eastern side; the first being a cave about 300 feet in extent; the second apparently a wide fissure in the limestone, partially filled up. The cave agrees in structure with many of those well known from the descriptions of Dr. Buckland and other writers: it descends, at first, with a moderate inclination; and about 125 feet from the mouth, the floor is thickly covered with a fine dry reddish dust, in which a few fragments of bones, apparently of kangaroos, occur. The cavern, in different places, affords beautiful stalactites and stalagmitic incrustations. Irregular cavities in the roof seem to lead towards the surface of the hill; and at the remotest part, the floor is covered with a heap of dry white dust, so loose and light, that one of the exploring party sunk into it up to the waist. This dust, when chemically examined by Dr. Turner, was found to consist principally of carbonate of lime, with some phosphate of lime and animal matter. In fine, the cave appeared to terminate in a fissure nearly vertical, with water at its bottom, about thirty feet below the lowest part of the cavern, and nearly on a level with the waters of the river Bell. This fissure also extends upwards towards the surface.

"About eighty feet to the west of the cave above described, is the mouth of another cavity of a different description, first examined by Mr. Rankin. At this place, the surface itself consists of a breccia, full of fragments of bones; and a similar compound, confusedly mixed with large rude blocks of limestone, forms the sides of the cavity, which is a nearly vertical, wide, and irregular sort of well, accessible only by the aid of ladders and ropes. This breccia con-

sists of an earthy red calcareous stone, having small fragments of the grey limestone of the valley dispersed through it, and in some parts, possesses considerable hardness. Near the lower part of the fissure (the whole extent of which was not explored,) were three layers of stalagmitic concretion, about two inches in thickness and three inches apart, the spaces being occupied with a red ochreous matter, with bones in abundance, imbedded both in stalagmite, and between the layers of it.

"The bones found in the fissure just described, of which specimens have been sent to England, belong, with only two exceptions, to animals at present known to exist in the adjacent country; and their dimensions also are very nearly the same with those of the existing quadrupeds. The species, from the report of Mr. Cliff, to whose examination the bones were submitted, appear to be as follow:—kangaroo, wombat, dasyurus, koala, phalangista—the most abundant being those of the kangaroo. Along with the remains just mentioned were found two bones, not agreeing with those of any of the animals at present known to exist in New South Wales. The first and larger is supposed to belong to the elephant: the second bone is also obscure and imperfect, but seems to be a part of one of the superior maxillary bones of an animal resembling the Dugong; it contains a portion of a straight tusk, pointing directly forward."

A pit was dug, by sir T. Mitchell's direction, in the surface of the ground, about twenty-five feet from the mouth of the fissure, at a place where no rocks projected; and the hill was there found to be composed of a hard and compact breccia, such as that before described, and likewise abounding in organic remains. Other caverns, containing a similar breccia, occur in the limestone on the north bank of the Macquarie, eight miles north-east of those at Wellington; and about fifty miles to the south-east at Buree, are several caves like the first described above, which communicate with fissures partially occupied with breccia containing bones. At Molong, thirty-six miles to the east of Wellington, a small quantity of concreted matter has been found, containing numerous bones, of which no specimens have been sent to Europe; but, from their size, they would appear to have belonged to species of animals or birds larger than those which are at present known in the country.

The specimens of rocks collected by captain King and Mr. Browne at different parts of the Australian coast line have been locally classified as follows:—

Granite.—Cape Cleveland; Cape Grafton; Endeavour River; Lizard Island; Round Hill, near Cape Grindall; Mount Caledon; Island, near Cape Arnhem; Melville Bay; Bald-Head, King George's Sound.

Various Slaty Rocks.—*Mica Slate*, Mallison's Island. *Talc Slate*, Endeavour River. *Slaty Clay* Inglis's Island, Crack Island,

Percy Island. *Horneblende Rock*, Pobassoo's Island, Half-way Bay, Prince Regent's River. *Granular Quartz*, Endeavour River, Montagu Sound, north-west coast. *Epidote*, Cape Clinton, Port Warrender, Careening Bay. *Quartzose Conglomerates and Ancient Sandstones*, Rod's Bay, Islands of the north and north-west coasts, Cambridge Gulf, York Sound, Prince Regent's River. *Pipe Clay*, Melville Bay, Goulbourn Island, Lethbridge Bay.

Rocks of the Trap Formation.—*Serpentine*, Port Macquarie, Percy Isles. *Sienite*, Rod's Bay. *Porphyry*, Cape Cleveland. *Porphyritic Conglomerate*, Cape Clinton, Percy Isles, Good's Island. *Compact Felspar*, Percy Isle, Repulse Bay, Sunday Island. *Greenstone*, Vansittart Bay, Bat Island, Careening Bay, Malu's Isle. *Clinkstone*, Morgan's Island, Pobassoo's Island. *Amygdaloid, with Chalcedony*, Port Warrender, Half-way Bay, Bat Island, Malu's Island. *Wacke*, Bat Island. *Recent Calcareous Breccia*, Sweer's Island, north coast; Dirk Hartog's and Rottenest Island, &c., west coast; King George's Sound, south coast. *Limestone, resembling, in the character of its organic remains, Mountain Limestone of England*, Interior of Australia, near the east coast.

The Coal Formation, as yet discovered, applicable for domestic or steam purposes, is confined chiefly to the east coast of Australia.

Not the least remarkable circumstance connected with Australia is the contrast its geological features present, when compared with the apparently volcanic islands in the adjacent Coral and Arafura seas. The line of islands between Cape York and Mount Cornwallis are all granite, or old metamorphic rocks, and those lying between that line and the volcanic islands of Erroob and Murray group, are all flat coral islands.

On the north-west coast of Australia the predominant geological feature is red sandstone, while at the island of Timor the little rocky headlands on the coast expose beds of coral and limestone, full of corals and shells apparently of recent formation. This limestone appears to constitute the whole surface of the island, spreading over all the adjacent high lands, at an elevation of 2,000 feet, giving them rather a smooth and level outline.

The rocky islands in the central north and south bend of Torres Strait are, in some instances, inhabited, but only those within thirty or more miles from the coast have cocoa-nut trees on them.

Diversity of surface and aspect produces, in Australia, diversity in appearance. Forest timber, brushwood, and grasses are not divided into zones, as in other countries, according to their elevation; the nature of the soil and the proximity of water seems to determine the class of productions, irrespective of latitude or altitude. In many places, the whole face of the country has the appearance of a landscape garden—a grove here, a lawn there—beyond a shrubbery, or clump of trees, and frequently a natural wall of a light-coloured stone, scarcely to be detected from good masonry, and appearing through the foliage like the enclosure of a parterre. The interior explorers found these apparent "pleasure grounds" of various sizes, suited to the humble cottage or the princely mansion. Even in my own limited experience of these strange regions, I have felt it difficult to realize the fact, that so far from having been adorned by the hand of civilized man, they were untrodden, save by the foot of the wandering savage.

The geology and natural vegetation of Australia, like those of other countries, appear to be intimately connected. In the districts with which we are best acquainted, the rock which forms the basis of the country, may be known from the kind of tree or herbage that flourishes on the soil above. For instance, the *eucalyptus pulv.*, a dwarfish tree, with glaucous-coloured leaves, growing mostly in scrub, indicates the sandstone formation; while those open, grassy, and park-like tracts, affording good pasturage, and thinly interspersed with the *eucalyptus mannifera*, characterize the secondary ranges of granite and porphyry: the limestone formation has on its superincumbent soil trees of lofty growth and vast size, while large umbrageous shrubs, the *cupressus callitris* and *casuarina*, occupy sandy ridges. From many facts adduced by the observant captain Sturt, it may be inferred that the trees are gregarious, and that the strong line that occasionally separates different species, and the sudden manner in which several species are lost at one point, to reappear at another more distant, may be ascribed to the geological strata of the country. It is, however, impossible to determine accurately the extent to which the peculiar geological structure of Australia influences the character of its productions: but it is a singular fact, that the vegetation of the north, or tropical coasts, differs totally from that of the adjacent islands. Cocoa-nut trees are nowhere to be

found in Australia, while at Murray's island, within the great Barrier reef, which is about 700 feet high at its most elevated part, with steep broken ground, the whole of its lower portion, and even a considerable part of the hills, are covered with groves of cocoa-nut trees. Mr. Jukes remarks, that at the island of Timor, where the difference of latitude is not more than forty miles from Port Essington, in North Australia, and the actual distance not 250 miles, the difference in the appearance of the vegetation is as great as one would expect between two countries lying under different zones. The gum trees (*eucalypti*) which line the shores of Australia, to 11° N. lat., are not found in New Guinea, or in the islands of the Eastern Archipelago.

Taking Endeavour Strait, Cape York, and Mount Adolphus as a base, all the islands which stretch across the Strait to the northward of them, have one common character. They are all steep and rocky, many of them 400 to 500 feet high. The rocks of the main land of the adjacent islands are all porphyritic; and Mr. Jukes considers these islands as, in fact, merely the submarine prolongation of the great mountain chain of the eastern coast of Australia, and remarks, that in Torres Strait the line of demarcation is almost equally strong and precise between two groups of vegetation and two groups of the lower order of animals, as between two varieties of the human race. A sombre vegetation spreads all over Cape York and the immediately adjacent islands, of which wide forests of large but ragged-stemmed gum-trees, with almost leafless branches, are the chief characteristic.

Here and there, says Mr. Jukes, speaking of the north coast, are gullies with more umbrageous foliage, and some palms, but the mass of the woods are arid, hot, and dusty, the leaves not only small but dry and brittle, and the marks of frequent fires everywhere apparent in calcined rocks, blackened stems and fallen trunks. The contrast with this northern coast of Australia and the islands on the northern side of Torres Straits, is certainly very great; there, not a gum tree is to be seen; the woods are close, lofty, and afford deep and refreshing shade, often matted into impenetrable thickets by creepers and undergrowth, but adorned with varied foliage, with the cocoa-nut, the plantain, and other trees and shrubs useful to man. On the New Guinea coast, the vegetation is extraordinarily luxuriant, even for the tropics. There is also a difference in

the shells and echinodermata, collected about Cape York and those obtained near Erroob or Darnley Island on the coast opposite to North Australia. In the mineral, the vegetable, and the animal kingdoms, and even in the human race (as will be shown in a subsequent chapter), the territories on each side of the narrow strait of Torres, present totally different aspects, which can scarcely be assigned to distinct geological formations; but it must be admitted that the sandstone strata which constitutes such a large portion of northern and north-western Australia, must have considerable influence in giving the peculiar dryness perceptible in Australia, where, as has been truly observed, every thing absorbs heat freely, and radiates it into the surrounding atmosphere; the sea air, instead of being cooled and precipitated in refreshing moisture, has its temperature raised, and becomes an absorbent of any moisture on the surface, for the open and scattered woodlands, with their small, thinly disseminated leaves, instead of protecting the soil from the parching effects of a vertical sun, become conductors of heat, and are ever ready to catch fire from the slightest spark. Captain Sturt experienced, in November, 1845, a severe gale of *hot* wind, in the parallel of 27° , and about the meridian of 140° . The withering effects of this gale, which was from the *north-east*, were terrific. Everything, animate and inanimate, gave way before it; the birds were mute, the leaves fell from the trees like a snow shower; the horses stood with their backs to the wind, and their noses to the ground, without the muscular strength to raise their heads. A thermometer graduated to 127° , after rising to 125° burst the bulb, by the expansion of the mercury. The air during the summer, in this region, had a temperature from 110° to 123° Fah.; the wind blowing heavily from N.E. to E.S.E., filled the air with impalpable red dust; the ground was so heated, that matches falling on it ignited, and rockets, on being lit, exploded at once without rising from the ground. The atmosphere, on some occasions, was so rarified, that captain Sturt and his party "felt a difficulty in breathing, and a buzzing sensation on the crown of the head, as if a hot iron had been there." On two occasions the thermometer was noticed to exceed the range of 130° Fah. *in the shade*, "the solar intensity, at the same time, being

nearly 160° ." At the *depôt* of captain Sturt, in lat. $29^{\circ} 40'$, from December, 1844, to the end of April, 1845, the prevailing winds were from E.N.E. to E.S.E.; after that month they were variable, but west winds predominated. The south wind was always cold, and invariably indicated by a rise of the barometer, which did not ascend above 30.260, or fall below 29.540: rain usually commenced in the north-east quarter, and gradually went round to the north-west. The sky, generally speaking, was without a speck, and the dazzling brightness of the moon was most distressing; it was impossible to shut out its light; and its irritating effects were very remarkable. At the *depôt*, the fleece of the sheep taken by the explorers into the interior ceased to grow, as did also the hair and nails of captain Sturt and his party. These facts, and the scanty vegetation, indicate the excessive dryness of this portion of central Australia, arising not only from the solar rays, but also by the terrestrial emission of heat from proximate volcanic fires. It is probable, also, that very little rain reaches the centre of Australia; on the north coast the rainy monsoons are greatly mitigated by the mountainous islands of the Eastern archipelago; on the north-east coast the lofty coast ridge of four to five thousand feet elevation intercepts the showers from the Southern Ocean; the Australian Alps, in the south-east, are the means of diffusing a large quantity of moisture over the adjacent region, but the comparatively lower elevation of the coast range of Western Australia permits a greater diffusion of rain and dew towards the interior. The presumed absence of any large mountains in the centre of Australia, the great distance of that centre from the ocean, the sandy formation of the country, and the saline qualities of the soil, all contribute to the belief that the interior of this insulated continent will not eventually be found available for the support of civilised man. But making large allowances for the barren central region, and for the sandstone wastes in other places, there probably is not less than two million square miles capable of yielding in abundance the productions of the temperate and of the torrid zones, and where horned cattle and sheep may be multiplied to an extent that would furnish all the inhabitants of Europe with animal food.

BOOK II.—NEW SOUTH WALES.

CHAPTER I.

ORIGIN OF TRANSPORTATION—EARLY SETTLEMENT AND HISTORY—CONVICT DISCIPLINE, AND RELIGIOUS REFORMATION—GRANT AND SALE OF CROWN LANDS—EFFECTS OF HIGH PRICES OF LAND—LIST OF GOVERNORS.

THE original settlement and early history of New South Wales, occupies one of the most interesting pages in the annals of British colonization. The formation of a convict settlement at the Antipodes, must have been a startling proposition, and the motives which actuated the government of the day in taking so bold a step, in a matter in which their conduct was naturally watched by the public with jealous scrutiny, can scarcely be rightly understood without some knowledge of the system of transportation previously pursued.

The causes which first necessitated the adoption of this punishment in England, in its primary form of simple banishment, may perhaps be traced to the immense increase of pauperism which followed the confiscation of church property and the extinction of monastic institutions in the reign of Henry VIII., and the absence of any efficient measures for the relief of the poor, or for the suppression of crime, which augmented so fearfully as to threaten the destruction of the very frame-work of society. An act of parliament in this reign, asserts that there were then no less than 60,000 prisoners (or about one out of every fifteen of all the males arrived at manhood) confined in the different gaols of England, and Hume appears disposed to believe that 72,000 of King Henry's subjects suffered death during the thirty-seven years of his sovereignty. In the reigns of his successors, Edward VI., Mary, and Elizabeth, various expedients were resorted to by the legislature, to check the growing progress of poverty and crime, one of which was an enactment for the raising of poor rates, (5 Eliz. c. 3), afterwards more fully carried out in a subsequent act (43 Eliz. c. 2.), and another very important measure was the first decree by which banishment from the kingdom was ordained as the punishment of rogues and vagabonds. In this act,

passed in the 39th year of the reign of Queen Elizabeth, the place of exile is not named.

In 1619, during the reign of James I., the practice of transporting convicts to America commenced, criminals being also in many instances allowed to transport themselves. An act of parliament (18 Charles II. c. 3.), empowered the judges to exile for life "the moss troopers of Cumberland and Northumberland" to any of His Majesty's possessions in America.

In 1717 an act of parliament was passed, (4 Geo. II. c. 11.), which recited the inefficiency of the general punishments then in use, and stated that, "in many of His Majesty's colonies and plantations in America, there was a great want of servants, who, by their labour and industry might be the means of improving and making the said colonies and plantations more useful to this nation." Under this act the prerogative of the crown to pardon was restricted by requiring as a condition, that before a convict who had once been assigned to a planter could avail himself of it, he should make compensation to his master for the loss of his services.

By virtue of this enactment, a shameful course of conduct was adopted in the disposal of the wretched prisoners, who were in fact sold into slavery at the average rate of twenty pounds per head; the numbers transported being about 2,000 per annum. The separation of the United States from England, put an end to this system, and the prisons becoming crowded, various expedients were suggested and resorted to for the relief of the country; among others that of conveying convicts to the west coast of Africa, there, according to the either ignorant or wantonly cruel proposition of some persons, to be turned loose among the unhappy negroes; the building of large penitentiaries was also strongly advocated; but

both these plans were abandoned, the one on account of the unhealthiness of the climate, the other by reason of the expense attending it, and its inefficiency in reclaiming offenders, to whose condition, Howard, and other christian philanthropists had strongly directed the attention of the nation.

At this critical juncture of affairs, the favourable description given by captain Cook of that part of New Holland which he had discovered and named New South Wales, determined the government to attempt the formation of a penal settlement at Botany Bay (so called by Sir Joseph Banks when there), as a means of attaining the following desirable ends:—1st. To rid the mother country of the yearly increasing number of prisoners who were accumulating in the gaols; 2nd. To afford a proper place for the safe custody and punishment of the criminals, as well as for their progressive and ultimate reformation; and, 3rd. To form a free colony out of the materials which the reformed prisoners would supply, in addition to families of free emigrants who might settle in the country from time to time.

In the twenty-fourth year of the reign of George III., an act of parliament was passed, which empowered his Majesty in Council to appoint to what place beyond the seas, either within or without his Majesty's dominions, offenders should be transported; and by two orders in Council, dated 6th December, 1786, the eastern coast of Australia, and the adjacent islands, were fixed upon as the places of banishment.

The small fleet destined for the conveyance of the exiles, consisting of the *Sirius* (a frigate), the *Supply* (an armed tender), three store ships, and six transports, assembled at the Isle of Wight, having on board 565 male, and 192 female convicts, with a guard, consisting of a major-commandant, three captains, twelve subalterns, twenty-four non-commissioned officers, and 168 privates, all of the royal marines, together with forty of the marines' wives and their children, and provisions and stores for two years. Captain Arthur Phillip, R.N., an experienced officer, was appointed governor of the projected colony, and commander of the expedition, which left the shores of England on the 13th of May, 1787, touched for supplies and stock at Teneriffe, Rio de Janeiro, and the Cape of Good Hope, and arrived, in safety, at Botany Bay, in January, 1788, after a voyage of upwards of eight

months, of which, however, four weeks were spent at the Cape of Good Hope.

On landing, governor Phillip was received by an armed body of the natives, but on seeing him approach, alone and without any weapon, they returned his confidence by laying down their own, and receiving him in a very friendly manner. On proceeding to examine the bay, he soon found, that though extensive, it was ill-adapted for the foundation of a large settlement, being open to the full sweep of the easterly winds, which rolled a tremendous sea on the beach, and the greater portion of the land, moreover, though delightful for botanizing, was found to be little better than a series of swamps and sterile sand, very badly supplied with water. Little suspecting the close vicinity of one of the finest harbours in the world, captain Phillip resolved to examine what captain Cook had termed Broken Bay, where the Hawkesbury disembogues; but, on his way thither, he stopped to investigate an inlet, marked in the chart as a boat harbour, to which (appearing of little importance) captain Cook had given the name of Port Jackson, from the seaman on the look-out, by whom it was descried. On passing the lofty headlands which form the entrance of this "boat harbour," the astonishment of the governor may be conceived, when he found himself in a haven in which the whole of the British navy might securely ride at anchor, navigable for vessels of any burthen fifteen miles from its mouth, indented with numerous coves, and sheltered from every wind. Thither the fleet was immediately removed; and, on the 26th of January, 1788, the British flag was hoisted on the shores of Sydney cove, then thinly wooded, and abounding in kangaroos. The silence and solitude of the forest were soon broken by the resounding stroke of the woodman's axe; the ground was cleared, tents pitched, the live stock (consisting of one bull, four cows, one bull-calf, one stallion, three mares, and three colts) landed, stores deposited, and the little colony (numbering 1,030 souls) established. Farms were laid out at Rose Hill (Parramatta) and other places; every encouragement was given to raise the means of sustenance from the soil, and a few convicts were emancipated, and obtained grants of lands as settlers. The governor having also received orders to form a settlement at Norfolk Island, with a view to the cultivation of the flax plant, which captain Cook had found growing there most

luxuriantly, the *Supply* sailed for that place in February, (1788) with lieutenant King as superintendent, accompanied by one surgeon, one petty officer, two private soldiers, two persons supposed to have some knowledge of flax dressing, and nine male and six female convicts with tents, implements for husbandry, tools for dressing flax, and provisions for six months. The *Supply* on its return to Port Jackson, (having been absent five weeks and two days) reported the extreme difficulty found in landing on Norfolk Island, and the unfortunate loss of five lives thereby, but brought most favourable accounts of the richness of the soil and salubrity of the climate. Meanwhile great and increasing difficulties were experienced by the infant colony at Sydney Cove, the scurvy broke out among the convicts, and resisted every attempt made to check its progress by medicine, while the evil tendencies of their minds, repressed in some degree during the voyage, and their rooted habits of idleness, became daily more manifest.

Among the numerous disappointments which the governor, notwithstanding the most strenuous exertions was doomed to experience, not the least was the frustration of his hopes of maintaining a friendly intercourse with the natives. M. de la Pérouse, (see p. 367) while he remained in Botany Bay, had some quarrel with the natives, in which he was unfortunately obliged to use his fire arms, and this affair, together with the ill behaviour of some of the convicts, who, in spite of all prohibitions had wandered among them, produced a shyness on the part of the aborigines which resulted in open enmity. The soil around Sydney Cove was found to be extremely sterile, so that the possibility of immediately raising sufficient grain for the settlement was out of the question, the cattle were lost through the neglect of the person in charge; while the conduct of the prisoners was too often very detrimental to the public weal, theft being general, and desertion into the woods not unfrequent. At one time forty persons were absent from the settlement *on their road to China!* These travellers consisted principally of Irish convicts, who being possessed with the idea that China was not far distant to the northward, were always making up parties for the purpose of decamping thither. Most of the wanderers perished of hunger, or were speared, and probably eaten by the natives. An anecdote is told of one who, after traversing the

woods near Sydney for several weeks, endeavouring to find the road to China, had not only lost his way, but, as is often the case when the traveller is bewildered in a forest, lost also his senses. As good luck would have it, Pat, almost famishing, reached what he thought a Chinese town; instinct drew him towards one bark hut in particular, which he cautiously approached, and was most agreeably astonished to find his wife, whom he joyously hailed with, "Oh! Judy dear, how did *you* find your way to China?" The number of natives who then resorted to the shores of Port Jackson to fish or hunt was considerable, and hostilities soon commenced between them and the new comers, in the course of which many cruelties on both sides were committed.

The *Sirius*, which had been despatched to the Cape of Good Hope for flour, returned in May, 1789, and although the supply she brought was not very large, as the ordinary rations of four months would exhaust it, yet it seemed to gladden every heart, and remove for a time the despondency which was rapidly gaining ground.

On the 4th of June, 1789, the second anniversary of his Majesty's birthday commemorated in this country, the governor endeavoured, as he had done on the previous occasion, to foster a loyal spirit by making it a day of rejoicing, and the convicts were permitted to perform Farquhar's comedy, "the Recruiting Officer;" the prologue spoken on the occasion contained a pertinent allusion to their own position in the words,

"True patriots we, for be it understood,

We left our country for our country's good."

In spite, however, of every effort to disguise or meet them, difficulties increased at Sydney, and the accounts from Norfolk Island continuing favourable, it was thought advisable to divide the colony. In February, 1790, a large body of convicts (above 200) together with two companies of marines, were ordered thither, on board the *Sirius* and the *Supply*. A serious evil, the injurious consequences of which were long felt in the colony, attended this measure. It being found that stock was improvidently killed, an order was given to prevent the further destruction of an article so essential in the present state of affairs, (the government rations having been thrice reduced since the beginning of November) until some necessary regulations could be published; but the officers and people who were about to embark were not included in this

prohibition. The mention of *future necessary regulations*, gave rise to an opinion among the convicts that on the departure of the ships, all the live stock in the colony would be called in, or that the owners would be deprived of the benefits which might result from its possession, and, under the pretence of its belonging to those who were exempted by the late order, nearly all the stock in the settlement was destroyed in the course of a few nights.

Another heavy disaster resulted from this unfortunate expedition, for the *Sirius*, which on its return was immediately to have proceeded to China for supplies, was lost with all the provisions which had been sent with the convicts, upon a reef at Norfolk Island; her officers, crew, and convicts were however all saved, having been dragged on shore, through the surf, on a grating. Owing to the increase of population without any corresponding augmentation of provisions, the inhabitants of Norfolk Island were on the eve of perishing, but for the unexpected relief afforded by a flight of aquatic birds which alighted on the island, to lay their eggs. Owing to the length of their pinions, these birds take wing with difficulty; and their numbers were so great, that for two months the settlers caught at least from 2,000 to 3,000 every night, and also procured an incalculable quantity of eggs; thus these "*birds of Providence*" saved the lives of the people.

To return to the principal settlement. The long-looked for ships from England did not arrive, and the necessity for procuring succour becoming daily more urgent, on the 17th of April, 1790, the *Supply* was sent to seek relief from Batavia. On the 20th of April the miserable ration issued from the public store to each man for seven days, was—flour, 2½ lbs.; rice, 2 lbs.; pork, 2 lbs.; and of this sadly insufficient ration, the pork, from the length of time that it had been in store, had shrunk away to nearly nothing. The manly and unselfish conduct of the governor had been throughout remarkable, but it was especially manifested during this season of severe trial; he gave up three hundred weight of flour which was his private property, declaring, that although it was not in his power to remove the want felt by the convicts, they might at least know that it was equally experienced even at the government house; and to this resolution he rigidly adhered. Every exertion was made to procure food by hunting and fishing; but, from the former pursuit, little benefit resulted,

only three small kangaroos being brought in at the end of a month by the persons employed to shoot for the settlement; and the food obtained from the latter was not often more than equal to supplying the people employed in the boats with one pound of fish per man, which was allowed them in addition to their ration. Even this scanty resource seemed likely to fail them in their greatest need; for on the first and second days of June, (their seasons, be it recollected, being exactly opposite to ours,) the stormy weather prevented fishing, and threatened to continue throughout the third day. The wretched people seemed destined to drink to the dregs the bitter cup of hope deferred.

They had long, and, as the event proved, rightly conjectured, that the non-arrival of supplies could not be owing to the wilful neglect of the home government, but must be consequent upon some unforeseen delay or fatal accident. Their worst fears received a speedy confirmation. On the afternoon of the 3rd of June, the long-looked-for signal was made for a ship at the South Head, which proved to be the *Lady Juliana* transport from Plymouth, not bearing the much-desired cargo of provisions, but laden, in its place, with 220 female convicts, and bringing to the unfortunate colonists intelligence of the loss of the store ship sent by government for their assistance. The *Guardian*, a forty-four gun ship, commanded by lieutenant Riou, had sailed from England in September, 1789, richly freighted with two years' provisions for the settlement, and an immense variety of all manner of stores. She had reached the Cape of Good Hope in safety, had there taken on board a quantity of stock for the settlement, and completed a garden, which had been prepared under the immediate inspection of Sir Joseph Banks, and contained 150 of the finest fruit trees. Leaving the Cape, the *Guardian* proceeded on her way; but on the 23rd of December she struck upon an iceberg in 45° 54' S. lat., 41° 30' E. long., and thereby received so much injury, that lieutenant Riou, to save her from instantly sinking, was compelled to throw overboard the greatest part of her valuable cargo. The stock was killed, the garden destroyed, and most of the passengers and crew left her, in five boats, four of which were never afterwards heard of; the fifth, with much difficulty, reached the Mauritius. Lieutenant Riou remained behind, resolved to sink with his vessel; but it was

otherwise ordained; and his life, preserved for a time, was eventually sacrificed for his country at Copenhagen, and the *Guardian*, with the loss of masts and rudder, after having been tossed about for several days, at the mercy of every gale, was fallen in with by a French frigate, near the Cape of Good Hope, and towed into Table Bay, where such of her stores as yet remained were landed.

In addition to the above disastrous tidings, the disappointed colonists were informed that 1,000 convicts might be shortly expected, and little benefit even of a temporary nature was consequent upon the arrival of the *Juliana*, the supply of provisions on board her being so inconsiderable as to justify only the addition of one pound and a half of flour being made to the weekly ration. A deep gloom, enhanced by the frustration of their hopes, when they were apparently on the eve of realization, overspread every countenance; but effectual relief was near at hand, on the 20th of the same month the *Justinia* arrived from England with a large cargo of provisions and stores. A few days after three transports, laden with the convicts whose coming had been announced by the *Juliana*, reached Port Jackson; 274 of these unhappy people had perished during the voyage, and disease was so rife among them that, according to lieutenant-colonel Collins, several of them died in the boats as they were being rowed to shore, or on the wharf as they were lifted out of the boats; both the living and the dead exhibited more horrid spectacles than had ever been witnessed in that country. Apart from the distressing state of the criminals themselves, the arrival of the transports was in other respects beneficial; for in addition to the provisions brought by them from England, were 400 tierces of beef, and 200 tierces of pork, saved from the *Guardian*, and put on board at the Cape of Good Hope, and all anxiety respecting the stores was subsequently set at rest by the adoption of a more regular system in the forwarding of supplies. The aspect of affairs began to brighten, the lines for a regular town were laid out, various public buildings commenced, and the non-commissioned officers and privates of the marines were encouraged in becoming settlers by grants of land. In September, 1791, H.M.S. *Gorgon* arrived at Sydney, convoying ten vessels, which formed what is termed the second fleet, the whole containing 1,695 male and 168 female convicts; upwards of 200 having died

during the voyage. In the December of the following year, governor Phillip, whose health was seriously impaired, left the colony which for nearly five years he had superintended with untiring zeal. To the firm but merciful and just policy which he consistently maintained, notwithstanding the varied difficulties of a most arduous position, may be attributed, under Providence, the successful issue of the infant settlement from the trials which so frequently threatened its destruction.

After the departure of governor Phillip, captain Grose administered the affairs of the colony, as lieutenant-governor, until the arrival of the new governor-general, captain Hunter, in September, 1795, who, it will be remembered, had previously commanded the *Sirius* frigate, when the settlement was first formed. Governor Hunter appears to have been an honest straight-forward sailor; his administration lasted five years, during which period the colony made considerable progress. Settlers occasionally arrived from England, and the accession of a regiment called the "New South Wales Corps" (afterwards the 102nd of the line) was beneficial in many respects.

The officers of this corps were much blamed by a portion of the population for engaging in mercantile pursuits instead of confining themselves strictly to the duties of their profession. In this censure Dr. Lang unites, but he appears to overlook the peculiar circumstances in which these gentlemen were placed, having nothing but their pay and convict rations to rely on for the support of themselves and their families. The price of provisions was at that period very high, wheat being 12s. a bushel, mutton 2s. a pound; a cow fetching £80, and so on in proportion. (See *Collin's Account of New South Wales*, p. 333.) This state of things compelled them to import their own supplies, and rear their own stock, and it was fortunate for the colony that they were enabled to do so. The total number of inhabitants, free and bond, was, on captain Hunter's departure in September, 1800, about 8,000; of these about 2,500 were stationed at Sydney, and the remainder at the agricultural establishments at Parramatta, Prospect, Toongabbee, and Castlehill. Captain King, R.N., who as lieutenant of the *Sirius*, had effected the settlement on Norfolk Island, was appointed to succeed Captain Hunter: his administration lasted for six years, and was distinguished by what is termed the

"Irish rebellion." Several hundred convicts, attached to the establishment at Castle-hill, twenty miles from Sydney, struck for their liberty; but being armed only with pikes, were, after a very brief contest, discomfited by the military at Vinegar Hill, a few miles from Parramatta, on the Hawkesbury road; a few were shot by the troops, some of the leaders taken and hanged immediately, and the rest returned quietly to their labour. This is the only instance of an insurrection of the convict population since the foundation of the settlement.

Governor King met with much opposition, and though zealous and conscientious, does not seem to have been adequate to the magnitude of his trust. A circumstance is said to have occurred during his tenure of office very characteristic of the then predominating genius of Botany Bay. Charges of a serious nature having been preferred against a gentleman in the colony, despatches relating thereto were prepared, to be forwarded to the secretary of state in England, but, the officer who had charge of them imprudently mentioned their contents, and the box when opened in due form in Downing-street, was found to contain only a bundle of newspapers, the criminating despatches having been adroitly abstracted from it before leaving Sydney. Captain Bligh, whose name is handed down with infamy to posterity, by reason of his tyrannical treatment of Christian and his comrades in H.M.S. *Bounty*, when sent to convey the bread fruit tree from the South Sea islands to the West Indies, was appointed to succeed captain King. The selection was singularly ill-judged, for a man who, notwithstanding his undoubted skill as a mariner, had shown himself incapable of governing a small ship's company, was clearly unfit to be trusted with arbitrary power in New South Wales, Captain Bligh's conduct there was only too much in accordance with his previous life. The former results of his tyrannical proceedings, appear to have utterly failed in teaching him either the duty or expediency of pursuing a different course of policy, for on entering his new position he behaved towards the whole population as if it had been entirely composed of criminals with abject minds; treated the officers of the New South Wales corps and the most respectable settlers with marked contempt, and was the first to trample under foot the rights which it was his especial duty to uphold. One individual in particular experienced from the governor an unwarrantable

series of persecutions. This gentleman, Mr. John M'Arthur, had obtained the name of the "Father of the Colony," and well did he deserve the appellation for the untiring zeal with which he strove to augment the resources, and raise the position of the land he had chosen for his home, stimulating the dormant energies of those about him by his own example, and aiding the poor by wealth honourably acquired during a long and extraordinarily active life. The oppressive and unjust sway of governor Bligh was endured by the colonists for eighteen months, but at length it became intolerable, and on the 26th of January, 1808, they rose with one accord, and, as with a single voice, having declared his deposition, vested the supreme authority in the hands of lieutenant-colonel Johnstone, the senior officer in command of the troops. The arrest of the governor having been resolved upon, the soldiers marched up to the Government House, with their officers at their head, to arrest the governor, who after a long search was discovered concealed under a servant's bed, in an upper chamber, covered with flue, and trembling with apprehension. Like most tyrants he was entirely devoid of moral courage, and it was a considerable time before he could be convinced that his life was in safety from the vengeance of the populace. Both his person and property were, however, carefully guarded, and after some time he embarked for England on board the *Porpoise* sloop of war.

From this period naval officers were no longer selected as governors. Lieutenant-colonel (afterwards major-general) Lachlan Macquarie was next appointed. The New South Wales regiment was ordered to England, and the regular troops of the line placed on the "roster" for service in the colony. During governor Macquarie's administration of twelve years, the settlement made great progress; the population was increased by numerous convicts and some emigrants, and by the aid of a *carte blanche* on the British treasury, many public buildings were erected—roads constructed—the fine Bathurst country over the Blue Mountains explored, and several government farms established. The convict population received great encouragement from general Macquarie; his maxim being to endeavour to induce every convict to consider his European life as a past existence, and his Australian one an entirely new, in which career he would find honesty to be the best policy,

and good conduct ensure its reward. This was his grand principle of government; but, like most men, strongly imbued with a favourite view, it sometimes led him too far. The emancipated convicts received from him an undue share of patronage—some he made magistrates, gave others colonial situations, and distributed among them large quantities of land. Truly philanthropic as were the motives which dictated his conduct, there yet appears reason to regret that governor Macquarie did not exercise more discrimination in his choice of individuals deserving of encouragement, and greater consideration for the feelings or prejudices of the free settlers, from whom he could not reasonably expect an entire appreciation of his own views; and from hence is said to have arisen the formation of two parties in the colony—the *exclusionists* and the *emancipists*, (or freed convicts,) who continued for many years engaged in active opposition to each other.

Major-general Sir Thomas Brisbane, who succeeded governor Macquarie in 1821, was an amiable and scientific man, but deficient in energy of character; his successor, lieutenant-general Sir Ralph Darling, possessed considerable ability, and strongly desired to benefit the colony; but his long employment at the "Horse-Guards," (a school well fitted for the inculcation of military discipline, but ill-calculated to prepare the mind to grapple successfully with the heterogeneous elements of which the society of New South Wales was composed,) and his previous government of a slave colony (the Mauritius), did not tend to qualify him for the exercise of the peculiar authority then vested in the governors of this semi-penal settlement. Intimate and personal knowledge of general Darling, both in his public and private capacity, seems to entitle me to bear testimony to his administrative abilities—to his remarkable aptitude for the despatch of public business, and high integrity of character. When officially employed in the colonial secretary's office at Sydney, and confidentially entrusted by the excellent secretary of the colony, the honourable Alexander M'Leay, with the drafting of the governor's despatches and letters, I had frequent opportunities of scrutinizing the motives which actuated the conduct of the governor, then violently attacked and maligned. From the example of lady Darling great benefit resulted. In conjunction with the governor and her family, she attended divine service

twice on every sabbath—that sacred day being, for the first time in the annals of the colony, duly observed at the government house; and in the charitable institutions which she set on foot, as well as the influence she exercised on the social habits and domestic peace of the colony, were forcibly illustrated how much both the present and prospective happiness of a community may be promoted by the righteous conduct of those set in high places.

The administration of the subsequent governors—major-general Sir R. Bourke, Sir George Gipps, and Sir Charles Augustus Fitzroy, does not require any particular mention. As is the case in all colonies, during the period of their passing from individual to constitutional rule, their governors had many difficulties to contend with, which, however, have been surmounted with remarkable success. The first step of a Legislative Council, partly nominated by the crown, and partly elective, was taken in the year 1840. That measure proved eminently successful, and has prepared the colonists for an elective House of Assembly, which is now about being granted by the crown and imperial legislature.

The colony has passed through periods of alternate prosperity and depression, in some instances arising from long-continued droughts, and in others from the too great speculation, consequent on the rapid acquisition of wealth. During a recent season of distress, sheep, the staple property of the colonists, were reduced to the price of two shillings and sixpence each, and every other commodity, or representative of value, was proportionably depreciated. Large quantities of sheep and horned cattle were boiled down merely for the sake of the tallow thus produced, and a new and lucrative article of export was thus created.

The colonists are now slowly recovering from four years of continued adversity; and, grown wiser by experience, they will not, it is to be hoped, again rush into foolish speculations, or engage in ruinous projects; at least, for some years to come, their enterprise and exertions are most likely to be characterized by prudence. But whether suffering from unpropitious seasons, or from the consequences of their own imprudence; or elated by riches and rapid progress, the colonists of New South Wales have, from the first, evinced a loyal attachment to the parent state—an ardent desire to participate in its glories, and an anxious wish to be

deemed worthy of the possession of those free and christian privileges which it is in the power of the crown and legislature of Britain to grant.

TRANSPORTATION, CONVICT DISCIPLINE, RELIGIOUS INSTRUCTION, AND REFORMATION OF CRIME.—This highly important subject, both in a political and Christian aspect, necessarily claims consideration in a work treating of a settlement once solely penal—but now totally devoid of a convict population; and the leading facts connected therewith, deserve record not only as composing a portion of the history of the past, fraught with warnings of the most serious nature, but also as affording incontrovertible evidence that England, notwithstanding her shortcomings as a Christian nation, has yet (at least in some degree) awakened to a sense of her responsibility as such. To be convinced of this, it needs but to look back upon her general conduct at the close of the last and the early part of the present century, with regard to the subject now under review, and compare it with the different line of policy now pursued.

In 1787, England, her statesmen, her philanthropists, and public opinion, through its organ the press, while evincing considerable solicitude for their temporal welfare, utterly disregarded the spiritual wants of the expatriated criminals sent to found a penal settlement at the antipodes, and also of those employed to guard and govern the erring wanderers.

The Rev. Samuel Marsden, the much esteemed chaplain of New South Wales from 1794 to the period of his death in 1838, in whose domestic circle I had the privilege of witnessing the practice as well as hearing the inculcation of the precepts of the Gospel, thus records this astounding fact; I say astounding in reference to the convictions and actions of the British nation,—of its statesmen, legislators, press, and public opinion, at the present day. The reverend gentleman states that “when the fleet was on the point of sailing with the first convicts for New South Wales in the year 1787, *no clergyman had been thought of*, and that a friend of his own, a pious man of some influence, anxious for the spiritual welfare of the convicts, made a strong appeal to those in authority upon the subject, and through the interest of the late bishop Porteous with Sir Joseph Banks the Rev. Richard Johnston was appointed chaplain.” Judge Burton, in his excellent

work on the *State of Religion and Education in New South Wales*, published in 1840, when narrating this circumstance, states that “an oversight equally remarkable took place upon the recent expedition to Port Essington, (for the foundation of a new colony on the north-west coast of Australia) under the command of Sir Gordon Bremer, in H.M.S. *Alligator*, accompanied by the *Britomart* brig, lieutenant Stanley commander, (son of the late bishop of Norwich) which sailed from England with *five hundred souls*, unprovided with any minister of religion. There was no clergyman at the disposal of the bishop of Australia when the expedition reached Sydney on its way to the place of intended settlement, but his lordship furnished it with such means as were in his power, he caused a temporary church to be constructed, and bibles, prayer-books, and other religious publications to be supplied to Sir Gordon Bremer.” No Christian will be surprised to learn that misfortune, sickness, and death have been rife at Port Essington, and that now, in February, 1850, a British ship of war is on its way from Singapore to convey the ill-fated survivors away from a settlement in whose formation the ordinances of religion were entirely unprovided for and disregarded.

To return to New South Wales. It is true that one minister of religion did accompany the fleet of 1787, and well he performed the duties to the extent of his strength; he visited the sick and the convicts in their several abodes, and administered to them consolation and instruction. But his labours were far from being satisfactory to himself, or as useful as he wished them to his flock; while barracks, and other substantial structures were built for the use of man, no temple was reared for the worship of the living God. For nearly seven years divine service was celebrated in the open air, subject to all the inconveniences and interruptions arising from a changeable climate. At length the reverend gentleman caused a temporary place of worship to be constructed at his own expense, which was opened for public worship on the 25th of August, 1795; but the attendance was small, and up to the year 1800, when governor Hunter quitted the colony, there were few who evinced any religious feeling. [Evidence before the House of Commons in 1812.] On the return of the Rev. Mr. Johnston to England in 1800, the spiritual guidance of the colony, with its annually increasing num-

ber of convicts, was confided to one chaplain (the Rev. Samuel Marsden) for seven years. In 1803, when the population amounted to 7,097 men, women, and children, it was found that there were a large number of Roman catholics without any pastor. To remedy this serious evil, a convict named James Dixon, who, it was alleged, had formerly been in priest's orders, received a conditional emancipation, with permission to exercise clerical functions.

In 1807, the Rev. S. Marsden proceeded to England to endeavour to procure assistance for the ministry of the established church, and to advocate a Christian mission to New Zealand. The Rev. Mr. Fulton temporarily officiated during his absence. In 1808, the Rev. Mr. Cowper arrived; in 1809, the Rev. Mr. Cartwright; and in 1810, Mr. Marsden returned, but the labour of these four chaplains was still very severe in visiting the widely spread districts..

In 1817, when the population amounted to 17,214 souls, of whom 6,777 were convicts, dispersed over a large territory, there were but five chaplains. At this time only one church had been built at Sydney, and one at Paramatta; but so few persons attended divine service, that one of the early governors was informed of the fact, and being induced himself to attend the Sabbath worship, announced that "he expected his example would be followed by the people." With reference to the Roman catholic church, how long it was left under the superintendence of an emancipated convict, is not exactly known: in 1818, the Rev. Mr. Flynn was appointed archpriest at Sydney, with power to confirm; but on his arrival at New South Wales he was rejected by the local government, and sent home on the ground of his having come out unsanctioned by the civil authorities. Mr. Flynn left behind him in the house of a Roman catholic at Sydney a "consecrated wafer," the symbol of the Eucharist, and the sole spiritual consolation which the Roman catholics possessed until the year 1820, was the assembling round the "bread of life" to offer up their prayers; at length they were gratified by the arrival of the Rev. Mr. Therry, who for six years was the only Roman catholic priest for New South Wales and Van Diemen's island.

The Presbyterian church was equally neglected. Until 1826 no minister of this persuasion was appointed to a chaplaincy in the colony, although a Presbyterian church

had been erected on the banks of the Hawkesbury, in 1809, in which a Scotch settler officiated as catechist. To the meritorious and long-continued exertions of the Rev. Dr. Lang, the Presbyterians were, in 1824-5, indebted for some attention to their urgent wants.

In 1833 the population consisted of 60,794 souls, of whom 16,151 were convicts; the Protestants numbered 43,095, and the Roman catholics 17,238. The Church of England establishment then consisted of an arch-deacon and fifteen chaplains, and within forty miles of Sydney there were seven stone or brick churches, two others in more remote parts of the colony, and several less permanent buildings. The Roman catholics had three clergymen, and the Presbyterians two. But so far was spiritual instruction from being deemed a necessity, for which it was the positive duty of government to provide, that Norfolk Island, with several hundred convicts, had no chaplain; and in Port Stephens, with a large body of convicts, and 100 free settlers, there was only an Irish convict schoolmaster. Under such circumstances it cannot be matter of surprise that crime rapidly increased in the colony; that the free emigrant population took alarm when they found, year after year, the convicts largely increased by augmenting deportations from England until their numbers equalled those of the emigrant class. The attention of the imperial parliament was called to the subject; it was said that transportation had failed, both as a punishment deterring from crime in England, and as a means of reformation in Australia, whereas it was the neglect of religious instruction, the total want of spiritual aid, the assignment of convicts to settlers who were themselves but recently emancipated, and who during their bondage had never heard the words of religion: it was these, and other radical defects, which had perverted the beneficial effects that might and probably would have arisen from a judicious system consistently carried out. The matter was first brought under public consideration by Mr. Justice Burton, one of the judges of the supreme court of New South Wales, in a charge which he delivered to the jury on the 18th November, 1835, a charge which at first exposed this eminent and pious judge to great and unmerited reprobation, but which under Providence eventually worked great good.

The following is an abstract of the facts

stated in this remarkable document, which soon attracted the attention of the government in England, as well as that of the Australian public. It was therein stated that—

"In 1833, there had been 135 capital convictions; on sixty-nine sentence of death had been passed; forty-five of those capital convictions, and fifteen of these sentences of death had taken place upon his (Judge Burton's) judicial responsibility.

"In 1834, 148 capital convictions, in eighty-three of which sentence of death had been passed, forty-eight of which convictions and thirty-six of which sentences had been before himself.

"In 1835, 116 capital convictions, and seventy-one sentences to suffer death, fifty-six of which convictions had taken place before him, and twenty-eight of which sentences he had passed. In addition to which sentences there are thirty-three prisoners who have been capitally convicted, waiting for sentence. Whether death might be recorded or passed upon them, the number of capital convictions was a feature sufficiently striking in the administration of justice in this colony; for it was to be remarked, that capital punishment had been taken away from several offences, such as forgery, cattle-stealing, stealing in a dwelling-house above the value of £5 (those fruitful sources of capital convictions in former times), ever since the 1st of August, 1833, so that those which had taken place since that time were all for crimes of violence, murder, rape, robbery, burglary, maliciously stabbing, shooting, and wounding, and offences of similar character.

"The calendar of the present sessions (1835) presented the following facts:—There had been convicted of murder, 2; stabbing with intent, &c., shooting at with intent to kill, cutting and maiming, assault with intent to do bodily harm, 6; manslaughter, 2; arson, 1; piracy and burglary, 8; housebreaking, 10; highway robbery, 7; receiving, 1; forgery, 2; larceny on the high seas, 1; larceny, 4; cattle-stealing, 1; piracy only, 1; robbery, 8—total, 54.

"Prisoners in gaol on the 18th of November, 1835, who had been in custody previous to the 2nd of November, 1835, viz.—For trial on the 18th, 7; quarter sessions, 6th December, 39; stand for next criminal session, 13; for discharge, 3; consideration, 19—total, 81. Tried on the 18th, 7; convicted, cattle stealing, 2; robbery and receiving, death recorded, 4; acquitted, 1—total, 7.

"The picture presented was one of the most painful description: it would appear, to one who could look down upon the community, as if the main business of all were the commission of crime and the punishment of it; as if the whole colony were continually in motion towards the several courts of justice, and the most painful reflection of all must be, that so many capital sentences and the execution of them have not had the effect of preventing crime by way of example.

"In his (Judge Burton's) opinion, one grand cause of such a state of things was, an overwhelming defect of religious principle in this community; a principle which he considered as the polar star to guide a man in all his conduct, and without which none other would prevent him from crime. But that he might not be said to make so grave a charge upon light foundations, he would instance the crimes of violence, the murders, the manslaughters in drunken revels, the perjuries, the false witnesses from motives of revenge or reward, which in the proceedings before

him had been brought to light. Many instances upon his notes of evidence in cases tried before him, had brought him to the conclusion that there is an overwhelming defect of religious principle in this colony.

"He could not but acknowledge there was a deficiency of religious instruction in the colony. There was not that number of religious teachers its extent and population required. He did not intend to impute blame to any one individually. But when he imputed a want of religious principle, he looked around to see whether there was an adequacy of religious instruction in order to point their attention to this circumstance; so that if they found a deficiency, they might call upon the proper authorities to make such an addition as necessity required. There were at present only thirty such persons for the whole of this scattered population, independent of a few whom the charity of societies in England had supplied—a number too scanty to admit of any being spared for the penal settlements. It had been his lot to visit one of those penal settlements. To see them herding together without any chance of improvement, without any religious instruction, was painful in the extreme. One man particularly had observed, in a manner which drew tears from his eyes and wrung his heart when he was placed before him for sentence, 'Let a man be what he will when he comes here, he is soon as bad as the rest; a man's heart is taken from him, and there is given to him the heart of a beast.' He did not impute blame to any one, and he trusted no such motives would be ascribed to him; but in a question of such vital importance, which involved not only the present but the ultimate welfare and security of the colony, all were interested; and it was the duty of every one to do what he could to ameliorate, if possible, its present condition. He only stated the fact, and lamented it.

"He felt, however, bound to say, that masters of convicts were not sufficiently attentive to the morals of their men; defective as our means of religious instruction might be, it had been proved before him, that highly respectable persons, residing near to a church in the same town, and within a few miles, not only neglected to oblige them to attend the church, but actually suffered them to spend the Lord's day amidst scenes of drunkenness and debauchery. Nor was that all. It had been further proved that the Lord's day, by some masters, was made a day of labour, and that some other day was allowed to them as an equivalent. But what equivalent, he would ask, could a master give for the loss of that moral instruction which the security of society required? There were, doubtless, many who, being under the necessity of attending a distant service, could not take their servants; but he would ask whether, in such situations, they did all which they could? He would ask, what was the example which had been set by them? What instruction did they give them? It was in every man's power to set an example of moral conduct, and observance of the Lord's day, in his own person, and to gather his family and servants together for divine worship, whether a church was near or distant. And he would farther beg to impress upon their minds, that they were not in a situation to blame others for want of moral instruction so long as they did not avail themselves of such means as were already within their power. He was sorry to say, that many of the worst crimes which had been brought under his notice were committed on the Lord's day, and he was led to apprehend, that

there was a very general disregard and desecration of it. There were other causes which led, in his opinion, to crime in this country. With respect to them there might be a difference of opinion; he could only say that he had formed his own; and as he was prepared to give it to the governor, he should be wanting in candour if he did not state it to them.

"He had been induced, by what had been proved before him in that court, gravely to consider the question of convicts working in gangs out of irons, and felt convinced it was one of the most fruitful sources of crime to be found in the colony. He had before him a return, from which it appeared that the number of convicts at this time employed upon the roads is 2,240, of whom 1,104 are out of irons! and (he continued) when they, the jury, considered who these latter men were, and what they had been—placed under the guardianship of a convict overseer; that they left their huts in any number, armed or unarmed as they pleased—in short, from the evidence he had upon his notes respecting the conduct of the road parties of the colony, it would appear that those establishments were like bee-hives, the inhabitants busily pouring in and out, but with this difference—the one works by day, the other by night; the one goes forth to industry, the other to plunder. To the carelessness or worse conduct of overseers, he did attribute a vast proportion of the burglaries and robberies that were committed in the country districts. It had been proved in a recent case, (he spoke from his notes), that a party of these men had committed a robbery, under such circumstances of aggravation, that sentence of death had been passed upon four of them. He must, however, say, that the settlers were themselves to blame for many of the crimes committed by convicts belonging to road parties. They too frequently appear to have employed these men in their leisure or working hours, or on a Sunday, paying them for their labour in money, which was spent in drink, and so prepared them for the commission of crimes.

"He must press upon their attention, considering the nature of the population of this colony—the fact that men are passing daily from one class to another—what must be the effect upon those institutions, and of men passing from one class to another without moral improvement? To himself it appeared, that it must be the total corruption of them all. In that point of view alone the subject was well worthy their grave attention. Free institutions could only be appreciated and enjoyed by the virtuous; coercion was for the depraved; and a vicious people have never continued to be free. He stated, that he felt he need do no more to impress upon all their minds the necessity there was for exercising all their influence to procure the moral improvement of those persons who are committed to their trust, and their utmost vigilance and superintendence over them to restrain them from crime, than draw their attention to the comparative numbers of the free and convicts in this colony, and to the fact, that the tide of convict population still sets strongly here, whilst that of free emigration appears feebly to reach our shores. He stated, that it appears from the census taken in September, 1833, published in the next government *Gazette* after the 31st December, 1833, that it was there estimated that there were in this colony—free males, above twelve years of age, 17,578; convict males, 21,845: and that he had been informed, that the number of free emigrants since arrived, up to

November, 1835, has been 2,800, of whom 900 are men, the rest being women and children; and that the number of convicts arrived since the same time has been 8,163, of whom 7,357 are males. He trusted they would take with them to their homes the facts he had stated, and the opinions he had expressed, and communicate them to their neighbours, so that each might judge for himself as to the justness of his views. The facts themselves he had drawn from what had come before him in evidence, and as such he put them. He sincerely hoped they would have proper weight upon the minds of every one to whom they were stated; and that as he had taken this opportunity of inquiring, on his part, what he had done during the last three years, each one of them would also consider what he had been doing during the same period."

But not only did the judge on the bench warn his Majesty's government of the spiritual destitution of the colony, the archdeacon (Broughton) of New South Wales proceeded to England in 1834 for a similar purpose; in February, 1835, this exemplary divine made a statement to the *Christian Knowledge Society* and to the *Society for the Propagation of Christian Knowledge*, when £3,000 was immediately placed at his disposal by the first-named society, and £1,000 by the latter. New South Wales was erected into a diocese, but bishop Broughton had the mortification of returning to the colony unaccompanied by a single clergyman, "owing to the refusal of his Majesty's government to sanction any allowance towards the expense of the passage, or residence, or means of support of any additional clergymen." This determination apparently arose, according to the first report of the Australian Diocesan Committee, from a prevailing impression that the inhabitants of the colony were opposed or at least indifferent to an extension of the ordinances of the church of England, whereas the reverse was the case. Although in some places the rites of religion were only performed monthly, in others *half-yearly*, and notwithstanding that the population had doubled between 1829 and 1837, and become much more widely scattered over the country, only two additional clergymen had been appointed from England.

Public opinion was now, however, strongly directed to the question of secondary punishments; the inefficiency of transportation, as a preventive of crime, was powerfully urged by the archbishop of Dublin (Dr. Whately) and other eminent persons, and a very unfavourable feeling was created against New South Wales, both as a penal settlement and as a colony to which respectable emigrants might resort. In the years 1837 and 1838 a select committee of the House of Commons

was therefore appointed to consider on this highly important subject, and although the evidence was to a great extent partial, yet many valuable facts were adduced deserving of record in a work of this nature.

From the report of the transportation committee of the House of Commons in 1838, it appears that "75,200 convicts have been transported to New South Wales since its settlement in 1787:—on the average of the last five years, 3,544 offenders have been annually sent there; and the whole convict population of the colony in 1836 amounted to 25,254 men and 2,577 women, in all 27,831. To Van Diemen's Island 27,759 convicts have been sent since the year 1817; the number annually transported there, on the average of the last five years, is 2,078; and the convict population in 1835 was 14,914 men and 2,054 women. At Norfolk Island the number of convicts, most of whom had been retransported for offences committed in New South Wales, was in 1837 above 1,200."

The plan formerly adopted in reference to Australian convicts is thus described by the transportation committee of 1838:—

"After sentence of transportation has been passed, convicts are sent to the hulks or gaols, where they remain till the period of their departure arrives. On board convict vessels the convicts are under the sole control of the surgeon-superintendent, who is furnished with instructions, as to his conduct, from the Admiralty. The precautions which have been taken against disease, and the better discipline now preserved in these ships, have applied an effectual remedy to the physical evils of the long voyage to Australia, and prevented the mortality amongst the prisoners, which prevailed to a fearful extent during the earlier periods of transportation. Little diminution, however, has taken place in those moral evils, which seem to be the necessary consequences of the close contact and communication between so many criminals, both during the period of confinement previous to embarkation, and during the weariness of a long voyage.

"As soon as a convict vessel reaches its place of destination, a report is made by the surgeon-superintendent to the governor. A day is then appointed for the colonial secretary, or for his deputy, to go on board, to muster the convicts, and to hear their complaints if they have any to make. The male convicts are, subsequently, removed to the convict barracks; the females to the penitentiaries. In New South Wales, however, regulations have lately been established, by which, in most cases, female convicts are enabled to proceed at once from the ship to private service. It is the duty of an officer, called the principal superintendent of convicts, to classify the newly-arrived convicts; the greater portion of whom are distributed amongst the settlers as assigned servants; the remainder are either retained in the employment of the government, or some few of them are sent to the penal settlements.

"In 1836 the number of assigned convicts in Van Diemen's Land was 6,476; in New South Wales in 1835 the number was 20,207. In the earlier periods

of the colony of New South Wales the supply of convicts so much exceeded the demand for their services by the settlers, that the government used to grant certain indulgences to those settlers who were willing to maintain convicts. More recently, the demand has exceeded the supply; the obtaining convict labourers has become, therefore, to a certain degree a matter of favour, which has given rise to complaints of abuse in the distribution, especially of the more valuable convicts. All applications for convicts are now made to an officer, called the commissioner for the assignment of convict servants, who is guided in his distribution of them by certain government regulations. Settlers, to whom convicts are assigned, are bound to send for them within a certain period of time, and to pay the sum of £1 a head for the clothing and bedding of each assigned convict. An assigned convict is entitled to a fixed amount of food and clothing, consisting, in New South Wales, of 12 lbs. of wheat, or of an equivalent in flour and maize meal, 7 lbs. of mutton or beef, or 4½ lbs. of salt pork, 2 oz. of salt, and 2 oz. of soap weekly; two frocks or jackets, three shirts, two pair of trousers, three pair of shoes, and a hat or a cap, annually. Each man is likewise supplied with one good blanket, and a palliasse or wool mattress, which are considered the property of the master. Any articles, which the master may supply beyond these, are voluntary indulgences. The allowance in Van Diemen's Land differs in some particulars, and on the whole is more liberal.

"Male assigned convicts may be classed under the various heads of field labourers, domestic servants, and mechanics: the services of the last class being of more value than those of the two former, are estimated in assignment as equal to those of two or more field labourers. In the assignment of convicts scarcely any distinction is made either on account of the period of the sentence, or on account of the age, the character, or the nature of the offence of the convict. The previous occupation of a convict in this country mainly determines his condition in the penal colonies. For instance, domestic servants, transported for any offence, are assigned as domestic servants in Australia: for the greater portion of such servants in those colonies, even in the establishments of the wealthiest classes, have hitherto been transported felons. They are well fed, well clothed, and receive wages from £10 to £15 a year, and are as well treated in respectable families, as similar descriptions of servants are in this country. In many instances, masters have even carried to an illegal extent their indulgences to their convict servants.

"Convicts who are mechanics are as well, if not better, treated than those who are domestic servants for as every kind of skilled labour is very scarce in New South Wales, a convict who has been a blacksmith, carpenter, mason, cooper, wheelwright, or gardener, is a most valuable servant, worth three or four ordinary convicts; he is eagerly sought after, and great interest is made to obtain him. As a mechanic can scarcely be compelled by punishment to exert his skill, it is for the interest of the master to conciliate his convict mechanic in order to induce him to work well; in too many cases this is effected by granting to the skilled convict various indulgences; by paying him wages; by allotting to him task-work, and by permitting him, after the performance of the task, to work on his own account; and, lastly, by conniving at, or overlooking, disorderly conduct; for the most skilful mechanics are generally the worst behaved and most drunken.

"The condition, however, of by far the most numerous class of convicts, those who are employed as shepherds or neatherds (of whom in 1837 there were above 8,000 in New South Wales), and in agriculture generally, is undoubtedly inferior to that of a convict who is either a domestic servant or a mechanic; they are, however, according to most of the witnesses, better fed than the generality of agricultural labourers in this country; most masters either pay them wages in money, or give them, instead of money, tea, sugar, tobacco, spirits, and other trifling indulgences.

"On the whole, therefore, your committee may assert that, in the families of well-conducted and respectable settlers, the condition of assigned convicts is much the same as the condition of similar descriptions of servants in this country; but this is by no means the case in the establishments of all settlers. As the lot of a slave depends upon the character of his master, so the condition of a convict depends upon the temper and disposition of the settler to whom he is assigned."

The act 5 Geo. IV., c. 84, gave the governor of a penal colony a property in the services of a transported offender for the period of his sentence, and authorized him to assign over such offender to any other person. There was a further power given to the governor by the act 30 Geo. III., c. 47, who, in the name of his Majesty, was authorized to remit absolutely or conditionally, the whole of the sentences of convicts; and the 9 Geo. IV., c. 83, empowered the governor to grant a temporary or partial remission of sentence; this power was limited by acts 2 & 3 Wm. IV., c. 62.

By the system in force in New South Wales "tickets of leave," which enabled a convict to live free, and work on his own account, within a prescribed district, (binding him to appear on Sundays before a magistrate), were granted to a seven-year convict, at the expiration of four years; for fourteen years at the end of six years; and for life at the end of eight years, unless his conduct during these periods had been very bad. These tickets of leave were liable to be cancelled, if the holder committed any offence for which he was punishable by a magistrate; and the effects of the system are thus recorded in the report of the committee of the House of Commons in 1838, p. xvii. :—

"This indulgence on the whole has a very useful effect, as it holds out hope to a convict if he behave well, and is liable to be reassumed in case of misconduct. Ticket-of-leave men find no difficulty in obtaining work at high wages; and having acquired experience in the colony, they are frequently preferred to lately-arrived emigrants. They fill many situations of trust in both colonies; such, for instance, as constables in the police, overseers of road-parties and chain-gangs; the better educated have been employed as superintendents of estates, as clerks to bankers, to lawyers and to shopkeepers, and even as tutors in private families; some have married free women, are in prosperous circumstances, and have even become

wealthy; and the real editor of one of the leading journals in the colony of New South Wales was a ticket-of-leave convict."

Many of the "ticket-of-leave" men, or those who obtained conditional or local pardons for long-continued good conduct, or for useful services, acquired large fortunes; one, named Sam Terry, possessed, it is said, an income of £40,000 a year; I rode over a large estate belonging to him on the beautiful banks of the Nepean river, the greater part of which was under cultivation, growing wheat, barley, oats, maize, clover, peas, beans, and other valuable products: it had also extensive herds of fine cattle and flocks of sheep: but the habitation of the owner of this vast property—with wealth then estimated at a quarter of a million sterling—was mean in the extreme. He could not, I believe, either read or write, but he had nevertheless a quickness of apprehension and a readiness in detecting errors in the accounts of his overseers which was so remarkable, that, as was said of Hyder Ali (the father of Tippoo Sultan) who also could neither read nor write, no man attempted to deceive him.

This and other instances becoming known, transportation to "Botany Bay" was deemed a very trifling punishment. The evidence laid before the House of Commons in 1837–8 proved the reverse, and the committee thus condense that evidence :—

"Your committee consider, that in the preceding pages they have fully established the fact, that transportation is not a simple punishment, but rather a series of punishments, embracing every degree of human suffering, from the lowest, consisting of a slight restraint upon the freedom of action, to the highest, consisting of long and tedious torture; and that the average amount of pain inflicted upon offenders, in consequence of a sentence of transportation, is very considerable. The most important question, however, as to the efficacy of transportation as a punishment, is not with regard to the actual amount of pain inflicted, but the amount which those who are likely to commit crime, believe to be inflicted. It is proved, beyond a doubt, by the testimony of every witness best acquainted with the actual condition of convicts, and likewise by numerous facts stated in the evidence, that most persons in this country, whether belonging to the criminal population, or connected with the administration of justice, are ignorant of the real amount of suffering inflicted upon a transported felon, and underrate the severity of the punishment of transportation. Nor is this to be wondered at, when it is considered, that the penal colonies are 16,000 miles distant, and that the ignorant mass of the criminal population of this country are often misled by their evil passions to underrate the consequences of their evil deeds. On their arrival at the antipodes, they discover that they have been grievously deceived by the accounts transmitted to them, and that their condition is a far more painful one than they expected. For those convicts

who write to their friends an account of their own fate, are generally persons who have been fortunate in the lottery of punishment, and truly describe their lot in flattering terms; those, on the other hand, who really experience the evils of transportation, and are haunted with 'a continual sense of degradation,' are seldom inclined to narrate their sufferings except when they have powerful friends from whom they may expect assistance. Numerous instances, likewise, were mentioned of convicts, who, degraded and demoralized by their punishment, have, from feelings of anger and revenge, indulged in the malicious satisfaction of denying the efficacy of the law, and of braving those who had brought them to condemnation, by describing as pleasures the tortures they were enduring; by affecting indifference for a punishment, which other criminals were actually committing murder and seeking death in order to avoid. Thus it is proved by the most irrefragable testimony, that both those who are prosperous and those who are miserable, the drawers of prizes and the drawers of blanks in this strange lottery, influenced perhaps by that desire, common to human nature, of having companions and partakers whether of misery or of happiness, concur in tempting their friends in this country, by the most alluring descriptions, to come out and join them; thereby tending to diminish the little apprehension, if any, which is entertained by the lower orders for the punishment of transportation.

"Transportation, though chiefly dreaded as exile, undoubtedly is much more than exile; it is slavery as well; and the condition of the convict slave is frequently a very miserable one; but that condition is unknown, and cannot be made known: for the physical condition of a convict is generally better than that of an agricultural labourer; the former is, in most cases, better fed and better clothed than the latter; it is the restraint on freedom of action, the degradation of slavery, and the other moral evils, which chiefly constitute the pains of transportation, and of which no description can convey an adequate idea to that class in whom transportation ought to inspire terror."

A magistrate, generally himself a master of convicts, was authorized to inflict fifty lashes on a convict for "drunkenness, disobedience of orders, neglect of work, absconding, abusive language to his master or overseer, or any other disorderly or dishonest conduct." For these offences the convict might likewise be punished by imprisonment, solitary confinement, and labour in irons on the roads. In 1835, the number of convicts in the colony did not exceed 28,000; the number of summary convictions for the year was 22,000; in one month, in 1833, the convicts flogged numbered 247, and the lashes administered were 9,874, which would give, for the year, 2,964 floggings, and 108,000 lashes inflicted. The report of 1838 is filled with horrible details of crimes and punishments, equally at variance with the general character of Englishmen.

The fearful extent to which corporal punishment was carried is shewn in the following numerical return of flagellations

at Macquarie Harbour, for the years 1822, '23, '24, '25, and '26:—

In the Years	Number of Prisoners sentenced.	Total Lashes sentenced.	Lashes remitted.	Total Lashes inflicted.
1822	169	7,000	863	6,137
1823	229	9,925	825	9,100
1824	153	6,850	141	6,709
1825	112	5,211	494	4,716
1826	172	7,324	1,263	6,061
Total	835	36,310	3,586	32,723

Note.—Settlement formed 3rd January, 1822, 70 male prisoners; 31st December, 1822, 181 prisoners at the settlement.—31st December, 1823, 228 prisoners at the settlement.—31st December, 1824, 262 prisoners at the settlement.—31st December, 1825, 259 prisoners at the settlement.—31st December, 1826, 295 prisoners at the settlement.

Thirty-two thousand, seven hundred and twenty-three lashes inflicted in five years! On an average, nearly forty lashes to each of the prisoners; and, be it remembered, with a "cat-o'-nine-tails," with nine knots on each tail, and of a heavier weight than any "cat" used in the army or navy.

The extreme severities exercised at Norfolk Island—the penal dependency of New South Wales, were fearful, and the transportation committee of 1837–38, reported the evil effects of such a system in language which cannot be transferred to these pages. The committee add, that at the penal settlements of Van Diemen's Island, the severity of the system pursued is as great, if not greater, than that at Norfolk Island, and the culprits equally reckless, if not even more so—committing murder (to use the words of sir George Arthur), "in order to enjoy the excitement of being sent up to Hobart Town for trial, though aware that, in the ordinary course, they must be executed within a fortnight after arrival." At one of these settlements, named Macquarie Harbour, (now abandoned) 116 convicts absconded, between 3rd January, 1822, and 16th May, 1827; of these, seventy-six are supposed to have perished in the woods: one was hanged for murdering and eating his companion; two were shot by the military; eight are known to have been murdered, and six eaten by their companions; twenty-four escaped to the settled districts, thirteen of whom were hanged for bush-ranging, and two for murder—total, 101 out of 116.

Perhaps no better illustration could be given of the manner in which the local government of New South Wales viewed the sabbath, more than half a century after the

foundation of the colony, than is contained in the evidence before the House of Commons' committee of February, 1838, of the very reverend William Ullathorne, (p. 21), who says—

"I visited a chain-gang, near Paramatta, on a Sunday, for the purpose of administering religious consolation, and when I came to the gang I found a series of boxes, and when the men were turned out, I was astonished to find the numbers that were turned out of each of those boxes; I could not have supposed that those boxes could have held such a number. *I found that they were locked up there during the whole of the Sunday; likewise during the whole of the time from sunset to sunrise.* On looking into those boxes, I found that there was a ledge on each side, and that the men were piled upon the ledges, and others below on the floor; and I believe from the bringing together of such numbers of men, heated as they are and excited, the consequences are of a very immoral kind. As I left the colony, I put a question to a clergyman, who has had much experience there, as to the space allowed to each convict in those boxes; the answer given was, that the average was about eighteen inches each man, but that they varied considerably. Eighteen inches square?—Yes; there are two shelves, so that some are piled above, and some below. He stated to me at the same time, that in the hulks he believed it was not more than sixteen inches, and that they were so closely piled, some ten or fourteen being put in a small cell, that they had not room to lie on their backs, and were obliged to lie sidewise. You have stated to the committee the condition of the male convicts; what is the condition and conduct of the female convicts?—The conduct of the females is very bad indeed; indeed they are, I should say, more irreformable than the male convicts; when a woman is bad, she is generally very bad."

By this herding together of criminals, the best were brought down to a level with the worst in disposition and corruption, and the finishing stroke was thereby given to the terrible system of severity only too frequently practised. Local magistrates being empowered to scourge the criminals at will; a look, a word, caused the scourge to be immediately administered to the unhappy offender—who sought his revenge in the murder of his master or the overseer—in the burning of his house and farm-stacks, and in the poisoning of the cattle; or the delinquent fled to the wild districts, became a bushranger, and was soon captured, and executed on the scaffold.

I saw and conversed with ten criminals in their condemned cells, on the eve of their execution. They had never heard the word of God preached since the period of their childhood, some not even then; they had never entered a church or chapel in the colony, or attended a sabbath service; and they had fled to the bush because their backs

had been repeatedly bared to the bone by constant scourgings. Having witnessed, while serving in the army and in the navy, the disastrous effects of subjecting men to the degrading torture inflicted on brutes, I bear my humble testimony in support of the evidence adduced before the transportation committee, that this species of punishment has had a most disastrous effect.

One passage in the parliamentary evidence deserves record on this important subject: the witness (who had great experience on the subject) was asked the relative value of the mild or the coercive system. He replied,

"I believe that a system of coercion will never reform men; it may restrain them, from fear, so long as the coercion is suspended immediately over them, but I do not think that it can be at all productive of reform; I always find that where there is severe coercion the pride of man rises up against that coercion, and that he hardens himself, and that it is generally his boast among those with whom he is associated, that he can endure as long as his master can inflict. I do not think that the result of a severer system of coercion has been followed by a greater amount of reformation; and I think if the number of prisoners at present in Van Diemen's Land undergoing punishment for new crimes in that country be inquired into, it will be found that the result has not been to reform men. I find that in the year 1835 the number of male convicts in Van Diemen's Land was 15,724; of this number I found that 3,947 were undergoing punishment at that time for new crimes in the colony, that is to say, about one-fourth; whilst I find at the same period that 2,462 enjoyed the indulgence of tickets of leave; they are somewhat less than one-sixth. Of females, I find, in 1835, that there were 2,195, and of those 408 were in the house of correction, that is to say, one-fifth; and that only 192, or one-tenth, had the indulgence of tickets of leave. I think, when it is considered how long that system has been in operation, if the result had been to reform, the first effects which would naturally result, viz. the greater number that would be under punishment, ought to have passed away, and that there ought to have been found very few comparatively under punishment; but if the number under punishment in Van Diemen's Land is compared to the number under punishment in New South Wales, I believe it will be found that the relative punishment is much greater in Van Diemen's Land than in New South Wales. It might be said that the greater number under punishment is only in consequence of the system that a greater number of criminals are brought to punishment, and a smaller number escape; this certainly would be the case in the beginning of the system, but after the system had wrought for some years, if it had created reformation, there ought to have been a much less number under punishment. I would remark, likewise, with respect to the system of severity, that it tends in another way to induce bad conduct; when a prisoner finds himself so severely treated by his master, he will always be apt to imagine that in another situation he will be much less severely treated; he will consequently be induced to behave particularly ill, in order to be returned to the government. I believe it has been stated in the instructions to overseers of chain-gangs in Van Diemen's Land, that

the prisoners are to be considered by them as under a sort of mental delirium; that they see all things through a false medium; in such a case, I should suppose that the prisoners who are under a severe system of coercion, would imagine that their condition could not possibly be worse, and the consequence would be that they would be induced to behave very ill, for the purpose of being removed from the service of their masters. I believe it has been found by experience that severe coercion has been productive of crimes of great magnitude; the quantity of ushrangers in Van Diemen's Land was at one time very great, and the number of executions was at one time extraordinarily great; and I found crimes existing in Van Diemen's Land resulting indirectly from that severe system, of which I have known no cases in New South Wales; there have been cases where prisoners have been so coerced in Van Diemen's Land that they have been determined at any cost whatever to release themselves from it; they have broken from their confinement, and after plundering the cottages and making to the woods, finding that they could not dare to appear again, they have had recourse to cannibalism for subsistence. I remember one particular case, which produced a great impression, when that coercive system was at its height at Macquarie Harbour, eleven men broke away, and finding that the police were in chase after them, they retired into the bush."

To the credit of the colonists, be it said, that they lost no time in earnestly appealing to the imperial government, as soon as the urgency of the matter was comprehended. A petition was transmitted to the House of Commons, in 1836, from six members of the Legislative Council, fifty-seven justices of the peace, four clergymen, five solicitors, 355 landholders, merchants, and other colonists, in which the petitioners stated, that although the colony presented an aspect of extraordinary and unexampled prosperity, the best interests of the community were threatened with serious danger, by the fearful increase of crime which had, of late years, taken place in the colony. The petitioners considered that the existing colonial law for the regulation of juries, by admitting persons to sit as jurors who had undergone punishment for crime, and were of bad repute, did not guard the administration of justice from sinister and contaminating influence, and that its natural effect was to encourage crime. New South Wales had not then an elective House of Assembly, and its Legislative Council, until 1842, was wholly nominated by the Crown; the colonists, therefore, were almost entirely dependent on the authorities in England for the regulation of their internal affairs, and consequently various other local grievances were laid before the House of Commons in their petition; themselves, however, taking the initiative in supplying their spiritual wants.

In 1836, an act was unanimously passed by the Legislative Council of New South Wales, to promote the building of churches and chapels, and to provide for the maintenance of religion in the colony; and, in the language of the governor, Sir Richard Bourke, to Lord Glenelg, his Majesty's secretary for the colonies, 14th September, 1836, "the measure met with the sincere and grateful acquiescence of all classes of the community." By this act, whenever a sum of not less than £300 was raised by private contribution, and applied towards the building of a church or chapel, and a dwelling for the minister attached, the governor and council were authorized to issue a sum equal to that subscribed towards the church or chapel, and the building for the resident minister. The governor and council were also empowered to grant unto duly appointed ministers, salaries varying from £100 per annum for 100 adults, to £150 and £200 per annum for a resident population of 150 or 200 adults. There are other favourable provisions in the enactment which was applicable to the church of England, church of Scotland, and church of Rome. The colonists also provided for the passage, from the United Kingdom to Australia, of ministers of the gospel of the three denominations named, at the rate of £100 for single men, and £150 for those who were married, and twelve clergymen of the established church were immediately sent to New South Wales, under the recommendation of the Society for the Propagation of the Gospel; twelve presbyterian ministers, under the recommendation of the General Assembly of the church of Scotland, and of the Synod of Ulster; and seven ministers of the church of Rome, recommended by the authorities of their church, were also sent out by government in 1837, conformable to the local enactment in New South Wales in 1836. Three German missionaries of the Lutheran church were also, in 1837, sent to New South Wales, at the expense of the colonists, who were to be employed in a mission for the religious instruction of the aborigines.

In order to carry out a general system of gratuitous education for the poorer classes of the community, the colonists, in June, 1837, defrayed the expenses of obtaining from England well-qualified and respectable schoolmasters and mistresses, to whom an allowance of £100 to £150 was granted; and a salary of £150 a-year for a master,

£100 for his wife, and a small dwelling-house was allowed. Under these provisions, his Majesty's government sent out, in 1837, sixteen teachers, carefully selected by the "Glasgow Educational Society." Six male, and four female teachers were sent by her Majesty's government, for the education of poor Roman catholics, under the recommendation of the Rev. W. Ullathorne; and, from time to time, many ministers of the gospel and teachers have proceeded to New South Wales, whose expenses have been defrayed from the local revenue.

In July, 1838, the evidence delivered before the transportation committee of the House of Commons, during the session of 1837, reached New South Wales, and produced "very considerable sensation;" and a petition, signed by "sixty-seven magistrates, and above 500 individuals of great respectability," was immediately presented to the governor, praying the appointment of a committee of the Legislative Council, to inquire into the working of the system of transportation and assignment, with a view to counteract, as far as possible, the evil impressions which might have been produced in England in respect to the social and moral condition of the colony. The Legislative Council, after protracted debates, negatived the prayer of the petition, from an apprehension that such an enquiry would tend to revive animosities in the colony which had happily, in a great degree, subsided; but the Council expressed its opinions by a series of resolutions, to be laid before both houses of the Imperial Legislature; and for this purpose they were transmitted, with the entire approbation of the governor, to her Majesty's secretary of state in the colonial department. It is an act of simple justice to place on record a declaration so highly creditable to the colony.

"Resolved—That in the opinion of this council, the numerous free emigrants of character and capital, including many officers of the army and navy, and East India Company's service, who have settled in the colony with their families, together with a rising generation of native-born subjects, constitute a body of colonists, who, in the exercise of the social and moral relations of life, are not inferior to the inhabitants of any other dependency of the British crown, and are sufficient to impress a character of respectability upon the colony at large.

"5. Resolved—That the rapid and increasing advance of this colony, in the short space of fifty years from its first establishment, in rural, commercial, and financial prosperity, proves indisputably the activity, the enterprise, and industry of the colonists, and is wholly incompatible with the state of society represented to exist here.

"6. Resolved—That the strong desire manifested by the colonists generally to obtain moral and religious instruction, and the liberal contributions which have been made from private funds towards this most essential object, abundantly testify that the advancement of virtue and religion amongst them is regarded with becoming solicitude.

"7. Resolved—That if transportation and assignment have hitherto failed to produce all the good effects anticipated by their projectors, such failure may be traced to circumstances, many of which are no longer in existence, whilst others are in rapid progress of amendment. Amongst the most prominent causes of failure may be adduced the absence, at the first establishment of the colony, of adequate religious and moral instruction, and the want of proper means of classification in the several gaols throughout the colony, as well as of a sufficient number of free emigrants properly qualified to become the assignees of convicts, and to be entrusted with their management and control.

"8. Resolved—That the great extension which has latterly been afforded of moral and religious instruction, the classification which may in future be made in the numerous gaols now in progress of erection, upon the most approved principles of inspection and separation, the more effectual punishment and classification of offenders in ironed gangs, according to their improved system of management, the numerous free emigrants now eligible as the assignees of convicts, and the accumulated experience of half a century, form a combination of circumstances which renders the colony better adapted, at the present, than at any former period, to carry into effect the praiseworthy intentions of the first founders of the system of transportation and assignment, which had no less for its object reformation of character, than a just infliction of punishment.

"9. Resolved—That in the opinion of this council, no system of penal discipline or secondary punishment will be found at once so cheap, so effective, and so reformatory, as that of well-regulated assignment, the good conduct of the convict, and his continuance at labour being so obviously the interest of the assignee, whilst the partial solitude and privations incidental to a pastoral or agricultural life in the remote districts of the colony, (which may be made the universal employment of convicts), by effectually breaking a connexion with companions and habits of vice, is better calculated than any other system to produce moral reformation, when accompanied by adequate religious instruction.

"10. Resolved—That in the opinion of this council, many men who, previously to their conviction, had been brought up in habits of idleness and vice, have acquired, by means of assignment, not only habits of industry and labour, but the knowledge of a remunerative employment, which, on becoming free, forms a strong inducement to continue in an honest course of life."

The details respecting the ecclesiastical establishment, schools, and state of crime, which will be found in a subsequent chapter, prove the correctness of the assertions contained in the above resolutions of the Legislative Council. New South Wales is now as little tainted with vice or crime as any other colony of the British crown.

At the commencement of 1839, the clergy-

men doing parochial duty in the colony under the jurisdiction of the Bishop of Australia (who was nominated in 1835) amounted to thirty-three. The number of Presbyterian clergymen was twenty-three; and of Roman catholic clergymen (including a bishop, nominated in 1835) borne upon the ecclesiastical establishment, was twenty. The number of missionaries attached to the Wesleyan mission was six; of baptist pastors five; and there was besides one "independent" minister. There were also several missionaries specially employed among the Aborigines. This affords a gratifying contrast to the state of the colony a few years previous. The result of these meritorious exertions on the part of the colonists, who bore the whole of the expense, was a rapid diminution of crime, and a marked improvement in the religious demeanour and social condition of the whole population.

In 1840, an order in Council was issued respecting the transportation of convicts, which recorded that by an act passed in the fifth year of the reign of king George the Fourth, his Majesty was empowered, by and with the advice of his privy council, from time to time to appoint any place beyond the seas, either within or without his Majesty's dominions, to which felons under sentence of transportation should be conveyed. In pursuance of the powers of this act, "New South Wales, Van Diemen's Land, and all islands adjacent thereto," were, on the 23rd June, 1824, appointed to be the places to which felons and others under sentence of transportation were to be conveyed. By the above-named order in Council, it was decreed that from and after the 1st August, 1840, "Van Diemen's Land, Norfolk Island, and the islands adjacent to, and comprised within, the government of Van Diemen's Land," should in future be the places to which felons and other offenders in the United Kingdom be conveyed, under sentence or order of transportation. From that date transportation to New South Wales ceased.

In August, 1838, the select committee of the House of Commons on transportation, recommended that "transportation to New South Wales, and to the settled districts of Van Diemen's island, should be discontinued as soon as practicable." The early adoption of this recommendation became essential to the well-being of the colony, from the large and increasing influx of convicts compared with the free immigrants. It will be seen by the accompanying table, that during the ten years ending 1834, the

number of convicts transported to New South Wales was 28,983, while the emigrants from this country were only 7,585.

Comparative Statement of the Number of Convicts arrived in New South Wales from 1825 to 1834, and of Free Emigrants from 1829 to 1834.

Year.	English.		Irish.		Tot	Free Emigrants.			
	Male.	Fem.	Male.	Fem.		Male.	Fem.	Chil.	Total
1825	764	140	901	111	1916	—	—	—	—
1826	679	—	1036	100	1815	—	—	—	—
1827	1230	342	846	160	2587	—	—	—	—
1828	1589	179	752	192	2712	—	—	—	—
1829	2008	319	1163	174	3664	306	113	1	564
1830	2096	128	685	316	3225	166	70	73	304
1831	1437	206	692	298	2633	185	98	174	457
1832	1810	248	928	133	3119	819	706	481	2006
1833	2719	377	794	261	4151	838	1146	701	2885
1834	1923	284	781	173	3161	571	596	397	1564
Total	16264	2223	8578	1918	28983	2885	2729	1971	7585

THE GRANT AND SALE OF CROWN LANDS is intimately connected with the past and present state of New South Wales, and the subject has occupied the attention of statesmen in England for twenty years, not merely as regards the amount of local revenue derivable from the sale of those lands, but as a means for the proportionate adjustment of land, labour, and capital, which, wisely used, may enable the government efficiently to promote emigration from the United Kingdom to those colonies in the temperate zone where British subjects can labour as at home, and obtain for that labour a more ample reward than could reasonably be expected in the crowded condition of the labour market in England. It may be necessary to premise, that there is little difference of opinion as to the injurious effects of granting large blocks of land to a few individuals; most persons agree in the advisability of the crown lands being sold in small sections, and put up for auction at a fixed minimum price. The collision of opinion has reference chiefly to what that fixed minimum price should be in the several colonies, or in the same colony in different stages of its progress.

In the *History of the Colonies* (vol. iv.), published in 1835, and in the *Colonial Magazine*, I stated my regret at being unable to agree with the founders of the colony of South Australia, in their resolve to obtain the assent of her Majesty's government to fix a *minimum* price of 12s. per acre on all public lands offered for sale by auction; and, among other grounds, I differed with them, 1st.—"By reason of the nature of the soil in Australia, it being extremely difficult to find good land in large continuous tracts; a rich fertile black mould of a few hundred

acres will sometimes be found suddenly interrupted by several thousand acres of a sandy scrubby ridge, far worse than Hampstead Heath." 2nd.—"A farmer could not afford 12s. per acre for the purchase of land, when 300 sheep would require upwards of 1,000 acres for pasturage." 3rd.—"The principle of concentration which it was sought to establish, by causing all land taken up to be cultivated, might be established, if the whole of Australia were like the fertile deltas of the Ganges or Nile; but that such was not the case, and Australia was better adapted for a pastoral than an agricultural country." 4th.—"Too high a price for land would check emigration." 5th.—"That the settlers would, of necessity, spread themselves over the distant unoccupied lands with their flocks and herds—no government could control their proceedings—and an excessive dispersion of population, instead of concentration, would be the result." How far this opinion has been verified, will be seen from the following abstract of the proceedings connected with the "land question" in New South Wales since the foundation of that settlement.

In 1790 (13th February), captain Phillip, then governor of New South Wales, in a letter to lord Sydney, recommended that grants of land, consisting of 500 to 1,000 acres, should be given to such settlers as his Majesty's government might send out to the colony; and, as the labour of clearing the ground of timber was very great, that each settler should have the services of twenty convicts allowed him, who should be supported for two years from the public stores. The inducements held out to officers and soldiers to become settlers, by grants of land, was strongly seconded by every possible encouragement to turn farmers, in order to render the settlement independent of any foreign aid for the supply of the necessaries of life. For this end land was freely granted, though not in large sections, to all classes, free or bond, in or out of the public service, who appeared capable of cultivating it; and convicts who thus exerted themselves received their freedom and a farm, as their reward.

The civil and military officers obtained large tracts; but in 1818 an order was issued to the governor of New South Wales to discontinue the practice of giving land to public officers whilst in the service; this regulation was afterwards relaxed, and public officers were placed on the same footing as settlers, in this respect, which appears to have been strongly advisable, otherwise, the greater

part of the landed property of the colony would have been vested in the hands of emancipated convicts and their descendants, to the exclusion of the educated and higher classes of colonial society. Most of the civil and military officers invested their savings in land; many retired from the service on the crown, and became extensive farmers and graziers, and some of the finest estates in New South Wales, which, both in the style of the mansions and the improvement of the land, would be an honour to any county in England, belong to the families of the civil, military, and naval officers who, in the early and suffering days of the colony, made it their home.

Up to the year 1823, the governor of New South Wales and Van Diemen's Island had the power of granting land to free settlers, and (as a reward to good behaviour) to convicts. When a convict was pardoned, the governor gave, to each male, a grant of twenty acres; if married, twenty more; and to each child in the settlement, ten acres, free from all charge for ten years; after which, a quit-rent of sixpence for thirty acres was levied. To each free settler the governor could make grants of land to the same extent as to convicts, and grant them 100 acres additional. The governor might make larger grants to both convicts and free settlers; but, for such grants, it was necessary to obtain the special approval of the secretary of state. Not unfrequently, also, rations were allowed, from the public stores, to free settlers as well as to the emancipists, until they could raise sufficient food from the soil. The power vested in the governor was extensively exercised. Up to the year 1810, the successive governors of New South Wales had given to individuals, principally to settlers who had been convicts, 177,500 acres, in grants seldom exceeding 100 acres; and it must be acknowledged, that the colony was largely indebted to this class for the production of an annually-increasing quantity of food, which rendered the inhabitants independent of foreign supplies. I visited many of the small farmers in the districts between the Hawkesbury river and Sydney, who had been pardoned by the several governors of New South Wales, or who, on completing their allotted period of servitude, had received free grants of land under 100 acres. In almost every instance I found industry, frugality, and order; in many, a deep regret for the sins of their youth, and an earnest desire that their chil-

dren should be trained in the path of religion. The forest was being gradually cleared around the log-huts; in various places the comfortable brick tenement had been raised, and the neat garden paled, while the full haggard and the lowing kine gave indications of a comfortable homestead. The free grant of these small tracts of land has been the means, under Providence, of permanently reclaiming many a sinner from the errors of his ways: a piece of land—although covered with a dense forest—which he could call his own, converted him from an avowed enemy of society, into one of its most strenuous defenders; he found, by experience, that honesty was the best policy; and his children learnt, from the lips of their parents, to revere the laws and institutions of the country whose wise and merciful policy produced such beneficial results.

There can be no doubt that land was too freely granted in New South Wales. Up to the year 1823, persons emigrating from England took with them letters from the secretary of state to the governor, directing land to be granted to the intending settler according to his means. Governor Macquarie fixed 2,000 acres as the maximum of grants, unless the secretary of state directed a larger quantity to be given. A number of grants were made of 10,000 to 20,000 acres. Mr. Potter Macqueen, then M.P., received a grant of 10,000 acres, and a reserve of 10,000; Mr. Hart Davis, then M.P., and Mr. H. Davis, jun., 15,000 each; Sir Thomas Brisbane, the marquis of Sligo, and Mr. J. Browne, 10,000 acres each, with reserves of 10,000 more each. (See Parliamentary Committee evidence, 11th July, 1836.) *No condition of residence was attached to these grants.*

In 1824 (1st October), an association, termed the Australian Agricultural Company, received a free grant of *one million acres*, on the following conditions:—After five years, a quit-rent of $1\frac{1}{4}$ per cent. on the land, to be valued at *1s. 6d.* per acre—payments every five years; power to redeem, on payment of twenty times the value of the quit-rent to be redeemed; to employ a number of convicts equal to the number of free labourers; one free superintendent to every fifty convicts; no land to be alienated for five years; quit-rent to be redeemed by the employment of a certain number of convicts; and the whole amount of quit-rent to be redeemed, if, within twenty years from the date of grant, it shall appear that the com-

pany have relieved the treasury from a charge equal to £100,000, to be calculated at the rate of £20 for each convict supported during a year.

From 1810 to 1822, during the administration of governor Macquarie, 400,000 acres were granted to free settlers and emancipists. From 1822 to 1831, when the plan of public sale was systematically introduced, the number of acres granted was about 3,386,250. Up to the 31st December, 1834, the total number granted in the colony was 4,163,353 acres. The conditions attached to these grants were various. According to the evidence of Mr. H. S. Kelsey, of the colonial office, before the House of Commons' committee of 1836, lands granted previous to November, 1823, were liable, at the end of ten years, to a quit-rent of *2s* for every 100 acres between November, 1823, and May, 1825; at the end of five years to a quit-rent of *15s.* for every 100 acres; and also, during the latter period, lands sold were liable to a quit-rent of *2s.* for every 100 acres; lands granted since May, 1825, were liable, at the end of seven years, to a quit-rent of *16s. 8d.* per 100 acres. Very little attention, however, was paid to the collection of the quit-rents. When in the colonial secretary's office in New South Wales, I strongly urged the yearly collection of these accumulating sums. In 1832, the amount due for quit-rents was estimated at £16,552; in 1846, at £69,000. In some cases, twenty-five years' quit-rent were due; in others, the arrears amounted to more than the value of the land.

In 1824 regulations for grants of land in New South Wales and Van Diemen's Land were issued by her Majesty's government, which announced that New South Wales and Van Diemen's Island were to be divided into counties, hundreds, and parishes, each parish to comprise an area of about twenty-five miles. A valuation to be made of all the lands in the colony, and an average price to be struck for each parish. All lands in the colony not hitherto granted to be put up for sale at a price to be fixed by the said commissioners; the largest quantity to be sold to one individual, 9,600 acres; the lots to be put up for sale in quantities of three square miles—1,920 acres. Any purchaser who, within ten years after his purchase, should, by the employment and maintenance of convicts, have relieved the public from a charge equal to ten times the amount of the purchase money, would have the pur-

chase money returned, but without interest. The saving to the public on each convict was estimated as equivalent to £16 per annum.

No grants to be made without purchase, unless the governor were satisfied that the grantees had both the power and the intention of expending in the cultivation of the land a capital equal to half the estimated value of it, within seven years. The largest grant, without purchase, to be 2,560 acres; the smallest, 320 acres. A quit-rent of five per cent. per acre upon the estimated value to be fixed upon the land granted without purchase. A nominal quit-rent of a pepper-corn to be made for lands purchased in fee-simple. Quit-rents not to be payable on grants for seven years; and in the redemption of the quit-rent at twenty years' purchase, the grantee to have credit for one-fifth part of the sum he might have saved to his Majesty's government, by the employment and maintenance of convicts.

In April, 1827, further instructions were issued from the office of the secretary of state for the colonies, in Downing Street, respecting the terms upon which land would be granted in New South Wales and Van Diemen's Island. Those terms corresponded with the foregoing, and it was stated, that persons who had obtained leave to become purchasers were to send in sealed tenders for the land advertised to be sold, and the highest bidder, if approved by the governor, to become the proprietor. One-fourth of the value of the land, estimated at the time of the grant, to be expended in the cultivation and improvement of the land, within seven years, under penalty of forfeiture. The amount of capital which was to be a criterion of the quantity of land to be granted, was £500 for a square mile—640 acres.

In 1828, Mr. Huskisson, then secretary of state for the colonies, laid before the Duke of Wellington, then first lord of the treasury, a proposition for the establishment of a metropolitan Colonial Land Board; the Duke assented, on condition that the board did not involve the revenues of the British exchequer in additional expense; to which Mr. Huskisson replied, that it would, on the contrary, create an additional source of revenue. Mr. Huskisson evidently had in view the system which had been for some years successfully adopted in the United States, of selling the public lands at a moderate fixed price per acre; formerly, the American government put up their land at two dollars per acre; in 1820 the upset price

was fixed at one dollar and twenty-five cents per acre; it is now, I believe, only one dollar, equal to fifty pence, per acre. The late Sir Wilmot Horton looked to the sale of the crown lands in the colonies as a means of raising a fund to promote emigration.

In 1831 instructions were issued under the royal sign manual (see p. 8, sess. paper of 1831, No. 328), directing, that for the future, land should be put up for auction at a minimum upset price of 5s. per acre. These regulations came into operation in the middle of the year 1831. Under them, the system of reserving land for ecclesiastical purposes was abolished, and the church and school corporation of New South Wales (which, in 1829, received 419,199 acres,) was dissolved. Simultaneously with the raising the price of land to 5s. per acre, all unoccupied lands within the prescribed limits were authorized to be let on lease, in conformity with the following instructions:—

"All crown lands within the prescribed limits will, if applied for, be let by auction, in lots of one square mile, or 640 acres each, as nearly as practicable. Persons desirous of renting such lands, will address themselves to the surveyor-general, taking care to describe accurately the situation of each section applied for. The lands so applied for will be advertised for one month, and the lease of each lot for one year will then be put up to public auction. No lot consisting of less than one square mile, or 640 acres, will be let, except in special cases, which may render expedient a departure from this rule. Each lot will be put up at a rent of 20s. a-year, and the highest bidding (not less than that sum) will be accepted. It is to be distinctly understood that the lands so let will be open for purchase; and in the event of their being sold, must be surrendered by the lessee upon one month's notice."

It was proposed during this year, by lord Howick (now earl Grey), then under secretary of state for the colonies, to apply the net revenue arising from the sale of lands in New South Wales in encouraging female emigration; and during the years 1832—35 there were sent to New South Wales and Van Diemen's Island 2,972 female emigrants, at a cost of £42,070.

During the years 1832, '3, '4, and '5, the colonies began to form a prominent subject of public discussion; political agitation in England, distress in Ireland, and the rapid increase of population, had turned the attention of thinking men to providing a permanent safety valve for the state by a system of continuous emigration from the United Kingdom.

In 1836 (10th June), a select committee of the House of Commons was appointed to enquire into the method of disposing of

waste lands in the colonies; but it is apparent from the list of the committee, and the well known opinions of the witnesses examined, that the evidence to be elicited was such as would be calculated to support a foregone conclusion. None of the members of the committee, except Mr. Roebuck, had ever been in any colony; the principal witnesses were Mr. Edward Gibbon Wakefield, and colonel Torrens, who were then engaged in the laudable effort to found the colony of South Australia on self-supporting principles, but who I think erroneously endeavoured to support their policy by fixing a high price on land; the sums thus received to be employed in conveying labour to the colony. None of the witnesses examined had ever been in Australia; two (captain Wood and Mr. Bryan) had been in Van Diemen's island, —one (Mr. George Stephenson) had been in the United States, and one (Mr. Burnly) in Trinidad. In the report of the committee (dated 10th August, 1836) it is stated, that since the year 1795 the sales of waste lands in the United States had produced the sum of £12,439,049, and that all land is offered for sale by auction at an upset price fixed by the legislature; the committee, however, omitted to state in their report that the price seldom exceeded 5s. per acre. They recommended that the principle introduced by the Earl of Ripon's regulations of 1831, namely, that land should be disposed of by auction at a minimum upset price—should be affirmed by an act of the Legislature, in order to give this principle a character of permanency and stability which it did not then possess. But the committee abstained from stating what that minimum price should be, as it must vary according to the circumstances of each colony, and "can only be determined in any one by the test of experience."

Mr. E. G. Wakefield proposed before this parliamentary committee that a "sufficient price" should be fixed on the colonial lands, but he declined stating what that sufficient price ought to be. Colonel Torrens, who, as chief commissioner of the South Australian association, has carried out some of Mr. Wakefield's views, gave his opinion of the "sufficient price" as at least 40s. an acre..

Mr. G. P. Scrope, M.P., in his valuable evidence before the committee (7th July, 1836), stated that supposing the theory of Mr. E. G. Wakefield to be correct, the practical adoption of the theory would be checked at a very early point for the following reasons:—1st, Emigration would be

checked to New South Wales by demanding a price for land much exceeding the terms on which land of equal fertility could be obtained in the United States. 2nd, That "a high price would prevent the colonists obtaining land: they would be driven to settle as squatters, and appropriate to themselves the occupation or use for a certain period of the land denied them to purchase, except at an extravagant rate." The arguments of Mr. Scrope, and the facts by which they were supported, successfully combated the vague theories put forth by Mr. Wakefield and colonel Torrens. He (Mr. Scrope) entreated the committee to eschew Mr. Wakefield's "leading principle" of colonization as founded on a fallacy, and dangerous, if attempted to be carried into operation, to the very objects in view: he therefore urged them to "adhere in the question of price to the safe and successful example of the United States;"—adding, that he wished to see all the crown lands disposed of after the American system, at not less than a certain minimum price, and the entire proceeds of those sales to be appropriated to an immigration fund, to defray the gratuitous introduction of labourers from the mother country.

In 1836 (12th October), after the committee of the House of Commons had closed its labours, colonel Torrens, as chairman of the South Australian commissioners, addressed a letter to Lord Glenelg, his Majesty's secretary of state for the colonies, objecting to the price of 5s., or any lesser sum, per acre for land in New South Wales and Port Phillip, while 12s. was the minimum price in South Australia, and urging that the labourers sent to South Australia would quit that colony for New South Wales if such an inequality in the price of land continued to exist in two adjoining colonies. Mr. (now Sir James) Stephen in an able reply to colonel Torrens, dated 27th October, 1836, stated on behalf of Lord Glenelg, that the persons who had embarked their property in South Australia knew perfectly well that 5s. per acre was the upset price in the immediately adjacent colonies; that on these terms (comparatively so low) the inducements to occupy large portions of land without licence had been found irresistible; that the "responsibility of the colonists rested with themselves, who must have been prepared for the competition of unauthorized occupants of the soil on the surface of that vast continent, and that it was a danger not concealed from the colonists at the very outset

of their enterprise." It is evident from this letter that Mr. Stephen foresaw the injurious effects attendant on an endeavour to fix a high price for land in New South Wales. He stated that—

"For some years past his Majesty's government have steadfastly enforced the rule, which forbids the alienation of wild lands in New Holland except by sales at a public auction at a fixed minimum price; but they have always perceived that circumstances beyond their control would fix that minimum at a lower point than that which would be selected, if the discretion of the government in this matter were absolutely free and unfettered. In the remotest part of the vast regions comprised within the range of the Australian colonies, the power of the law is unavoidably feeble when opposed by the predominant inclinations of any large body of the people; in such a country unpopular regulations, unless supported by a force either of police or soldiery, irresistible and overwhelming, must become little more than a dead letter.

"Thus, in New South Wales, the squatters (to employ the significant local term) find in the *high upset price of land* some of those advantages which a smuggler in other countries derives from a high rate of duty; their proceedings, instead of being condemned and opposed, are countenanced and supported by the society to which they belong, consequently an extensive territory, at a distance from the seat of government, has been occupied by unauthorised settlers of all classes, by the wealthy not less than by the poor; and, in this systematic violation of the law, each class finds support and encouragement in the example and common interest of its various members. With the most earnest desire to repress the growing evil, the local authorities have experienced the impossibility of making an effectual resistance to the general will."

Lord Glenelg, therefore, through the under secretary of state, Mr. Stephen, expressed his determination of not attempting to raise the price of land in New South Wales to the rate at which theorists wished it to be fixed at in South Australia; and stated that "even the fixed price of 5*s.* had afforded an irresistible temptation at Port Phillip to the unauthorised occupation of the soil; the governor (Sir R. Bourke) was consequently authorised to relax the rule of price at Port Phillip if he should find it indispensable to check the evil of the unlicensed occupation of the newly explored territory."

In 1837 (15th February) Lord Glenelg sent to Sir R. Bourke, then governor of New South Wales, the correspondence with colonel Torrens, and required a report how far the discretion of the local government had been exercised in fixing a higher rate than 5*s.* per acre as the upset price of lands supposed to be of peculiar value. Sir R. Bourke informed the secretary of state that in the first place the competition for land in the neighbourhood of Melbourne and Wil-

liams' Town, Port Phillip, had caused the waste lands to be sold at a price which would prevent any further cause for alarm in the South Australian commissioners. With regard to New South Wales, the government rightly considered that competition at public sale would always determine the real value of any allotments, and that the competition which was rapidly increasing would become more active as the colony advanced in wealth and population.

In support of his opinion the governor adduced the following table, showing the average price of crown lands sold in the colony of New South Wales, for the five years ending the 31st December, 1836:—

Year.	Town Allotments, per Perch.		Other Land, per Acre.	
	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>
1832	2	10	6	0
1833	2	4	9	6
1834	6	2	6	8
1835	5	2	5	10
1836	4	2	6	2

The opinions of Sir Richard Bourke on this highly important subject, not only in reference to New South Wales, but to all colonies with waste lands, so clearly indicate the evils which have since ensued from a disregard of those arguments, urged with all the weight of local experience, and enforced by sound reasoning, that I am induced to give them at full length. In testimony of their practical value, Mr. Justice Therry, who had been nineteen years in New South Wales, stated in his evidence before the House of Lords, 9th June, 1848, that governor Sir Richard Bourke, in the despatch of 1837, "anticipated the evils which have since resulted, and which would have been averted if the course he recommended had been abided by."

The governor thus reasoned:—

"If it be objected that such an effective competition as I have described, arising from increased population and wealth, in itself indicates the propriety of raising the minimum price of 1837 over that of 1831, I would observe, that the crown lands now in the market form only a surplus; in many instances they may be justly called a refuse, consisting of lands which in past years were not saleable at any price, and were not sought after even as free grants. As improvement and population penetrate through the colony, such lands begin to acquire a value, and there is a stage in this process in which they are saleable at the present minimum price of 5*s.* By declining in future to dispose of them at this rate, it by no means follows that they will be sold at a higher. The result may be to retain them for an indefinite time unsold. Such a result, as your lordship appears fully aware,

is the more likely, or rather certain, in consequence of the alternative at the settler's command of wandering without authority or restraint with his flocks and herds over the vast tracts of the interior. A facility in acquiring the actual property of land at a low price is the safest check to this practice, and it may here be observed, that the unauthorised occupiers of remote crown lands do not wholly consist of small flock-owners of slender means, but of the agents and shepherds of the wealthiest colonists residing within the limits of location, who are continually balancing between the opposite motives presented by the cheapness of unauthorised occupation on the one hand, and the desire of adding to their permanent property in land on the other. The extent of their purchases at the government sales corresponds with the prevalence of the latter motive, and it is easy to see that its influence must be weakened in proportion to the augmentation of the upset price.

"But though I am convinced that in almost every case the present value of land is obtained by means of the competition excited by public sales, yet it is possible that an augmentation of the minimum price would have the injurious effect of checking the immigration of persons possessed of small capital desirous of establishing themselves upon land of their own. There are very few new comers who possess sufficient means to purchase, at a price much above 5s., the large tract of land which in this country is absolutely necessary for even the commencement of an ordinary grazing establishment. Again, the inducements offered to retired officers to settle in the colony, by obtaining land at the minimum price, would be much diminished if that price were raised. These officers, both as regards numbers and character, are no small acquisition to the rural population of the colony.

"Apprehending, therefore, that to raise the upset price of crown lands would introduce much of the mischief I have represented; believing also that the influence of competition is becoming daily a more certain safeguard against the sale of any land below its just value; considering further the general impolicy of meddling without imperative necessity with any established system affecting so nearly the foundations of property, especially with one which has been found hitherto to operate so advantageously, I am unable to recommend any change in the minimum price at

which crown lands are, under the present regulations, offered to sale by public auction in New South Wales."

In 1840 Lord John Russell, then her Majesty's secretary of state for the colonies, sent a despatch to Sir George Gipps, governor of New South Wales, containing instructions, dated 23rd May, 1840, under the royal sign manual, respecting the settlement and alienation of waste lands in the colony. New South Wales was to be divided into three districts, northern, middle, and southern. In the middle district, the minimum upset price of land at public auction to be 12s. per acre; in the southern or Port Phillip district, all lands, in future, to be "open to sale at one uniform price" of 20s. per acre, subject to a few qualifications. Lord J. Russell stated, that £1 an acre appeared a reasonable price, advertising to the proceeds of sales hitherto; that it appeared to answer well in the neighbouring colony of South Australia, and that it would probably be advisable to offer lots for sale in sections of 160 or 80 acres; town lots to be at the rate of £100 per acre.

In 1840 (10th December), Sir George Gipps, then governor of New South Wales, forwarded to Lord John Russell a "Memorandum on the Disposal of Lands in the Australian colonies," in which he assumed that 5s. per acre was decidedly too low, as a minimum price, although he acknowledged that the land seldom produced at auction more, and that there was a glut of land in the market at that rate. The governor stated that in 1839 the minimum price was raised to 12s. per acre, and he gave the general results as follows:—

	Years.	Country Lands.			Town Allotments.				Country Lands and Town Allotments.									
		Acres.	Price per Acre.		Sum.	Acres.	Price per Acre.		Sum.	Acres.	Price per Acre.		Sum.					
			£.	s.			d.	£.			s.	d.		£.	s.	d.		
Old Parts of the Colony.	1838	278,323	0	5	4½	75,159	185	3	26	17	7	4	3,228	278,509	0	5	7½	78,387
	1839	198,198	0	8	1½	80,836	231	0	22	29	0	11½	6,714	198,429	0	8	9½	87,550
	1840	94,878	0	13	1½	62,360	513	1	25	69	3	7½	35,518	95,391	1	0	6½	97,878
	1837	—	—	—	—	87	3	20	81	5	8½	7,142	88	81	5	8	7,142	
Port Phillip.	1838	38,653	0	13	3	25,587	41	1	12	213	11	7½	8,826	38,694	0	17	9½	34,414
	1839	38,283	1	10	11	61,102	65	1	8	137	19	0	9,008	38,348	1	16	6½	70,110
	1840	82,729	1	12	11	136,367	169	2	16	487	16	2	82,732	82,899	2	12	10	219,100

A great stimulus to the purchase of land was given in 1839—40, and '41, throughout Australia generally, but more especially at Port Phillip; it is not, therefore, surprising, that large sums were realized, both for town and country sections. In New South Wales, however, this was not the case, for the

quantity of country land sold greatly diminished, thus—1838, acres 278,323, at 5s. 4½d. per acre = £75,159; 1840, acres 84,878, at 13s. 1½d. per acre = £62,360. It was erroneously supposed, that because land sold at 12s., and, subsequently, at 20s. an acre, in South Australia, therefore the same price

could be realized in New South Wales; but it was forgotten, that independent of delusion at home, and peculiar circumstances, that a system of special surveys was introduced in South Australia, whereby any person binding himself to take 4,000 acres, might require a survey of 15,000, and out of this he might select his portion in lots of not less than eighty acres; so that with such a privilege, he selected all the good and left the bad land. He might also make his selection of a narrow strip with water frontage, thus rendering the back land unavailable for any one else. A gambling system was also introduced, by giving to the purchasers of a certain number of acres, gratuitously, or almost gratuitously, a lottery or raffle ticket for a town or building allotment, which, in some places, was very valuable. Many persons, in England, who bought land in South Australia during the period of the "land mania," have never, to this day, received one shilling in return for their outlay. The memorandum of Sir George Gipps is well nigh unintelligible; he condemns the system adopted in South Australia, as a gambling speculation, depending on a throw of dice; he considers, that "Australia is a pastoral country, and must remain such, for ages;" that "scarcely one hundredth part of the land sold by the government in Australia, is ever purchased for the purpose of being cultivated;" and that "the enterprising colonists who first drove sheep and cattle from New South Wales to South Australia, rescued that colony from ruin;" and yet, after an entire condemnation of the fallacies which were sedulously propagated respecting the "new principle," and the "sufficient price" at South Australia, Sir George Gipps appears to recommend to her Majesty's ministers, in England, the raising of the price of land in New South Wales, as a raw material, above 5s. per acre.

In this memorandum the governor of New South Wales thus correctly described the character of the squatters, and the extent to which squatting was then carried on:—

"A very large proportion of the land which is to form the new district of Port Phillip, is already in the licensed occupation of the squatters of New South Wales, a class of persons whom it would be wrong to confound with those who bear the same name in America, and who are generally persons of mean repute and of small means, who have taken unauthorised possession of patches of land. Amongst the squatters of New South Wales are the wealthiest of the land, occupying, with the permission of government, thousands and tens of thousands of acres. Young men of good family and connexions

in England, officers of the army and navy, graduates of Oxford and Cambridge, are also in no small number amongst them.

"At the end of 1839, the cattle depastured beyond the boundaries was returned as follows, though probably the real quantity was much greater: sheep, 1,334,593; horned cattle, 371,699; horses, 7,088. The number of acres in cultivation was also returned as 7,287."

In 1841 (17th July), the Colonial Land and Emigration Commissioners (T. F. Elliott, esq. and the honourable E. E. Villiers,) addressed a valuable letter to James Stephen, esq., under-secretary for the colonies, in which they stated that they could *not* agree in the recommendation of the South Australian committee, that the upset price of land should be at once raised in South Australia and the other Australian colonies. The commissioners observe, that while they deem the price of land should be progressively increased, until the object of establishing a due proportion between the supply and demand for labour, and between the population and the extent of territory occupied by it, shall have been accomplished; yet, that the extent to which the price of land can be raised, has limits beyond which no authority will avail; and, that just as the smuggler places a limit beyond which the duties of customs cannot be increased, so the squatter would defeat an indefinite increase of the price of land; for, as soon as the consideration demanded by government for granting a title became extravagant, persons would prefer the course of taking land without a title, and bearing the risk.

In the annexed paragraph, the commissioners clearly foretold the disadvantageous results attending an increase of price above the 12s. then prevailing in New South Wales:—

"It appears to us, that as to the possible effect of a low price in withdrawing persons from labouring for hire in the colony, there may be some misapprehension as to the state of facts. In North America, where lots were of small size, and their value was to be realised by force of human labour only, it is not questioned that too great a facility of acquiring land withdrew large numbers from the class of labourers. But in the Australian colonies, where land requires to be in large quantities, for the principal use to which it is turned, and where also the profit to be derived from it depends not upon mere human toil, but upon the acquisition and rearing of stock, requiring a considerable further outlay of capital, it may well be doubted whether the same effect is to be apprehended. We certainly do not remember to have seen it mentioned in any official accounts from these colonies, that land has been acquired by persons in the condition and with the means of labourers; and Sir George Gipps, in the memorandum which

forms one of the papers now under consideration, mentions, that it is 'rarely advantageous in any part of Australia for a newly-arrived emigrant to become a proprietor of land, unless his capital is considerable.' This would seem to imply that the temptation held out by land to people of small means is not very considerable. The truth, perhaps, is, that *various other causes, besides the price of land, must govern the usual rate of wages.* It is, we believe, generally understood, that where the capital which can be profitably used in employing labour is very large, in proportion to the number of labourers that can be obtained, wages will be high; and this will continue equally true, whatever might be the existing land regulations. We fear, therefore, that if we were to undertake progressively to increase the price of land until labour should be abundant, and employment as much divided as in old countries, *we might possibly extinguish the land sales before we should have reduced wages; that we might seriously diminish the resources for producing the great staple of the Australian settlements, and perhaps have engendered an extensive system of unauthorized squatting.* We feel the force of this apprehension the more, when we advert to the opinion of the committee, that after once a minimum price has been declared, it ought not to admit of being lowered, except by an act of the British Parliament."

In 1842, the system of sale by auction was resumed throughout the colony, at a minimum upset price of 12*s.* per acre for country lands, with liberty to select portions not bid for at the upset price.

In a speech delivered in Council by Sir George Gipps, the governor of New South Wales, on 9th September, 1842, he used these remarkable expressions:—"I do not advocate the putting the squatter on a par with the purchaser of crown land; to do this, would be effectually to nullify all the regulations which have been introduced for the disposal or sale of land, since land began to be of any value in the colony. * * * So obviously does the squatting system act to prevent the sale of crown lands, that the late secretary of state, in a despatch which has been laid before the Council (dated 20th June, 1840), pointed out the propriety of raising the price of a licence to depasture stock beyond the boundaries, to five or six times its present limit." It must, however, be admitted, that when the government adopted the theory of raising the price of land beyond its real value, the colony would, to a great extent, have been ruined, but for the squatters, whose exertions have increased the quantity of stock, and greatly multiplied the exportable produce of the settlement.

In 1843, the minimum price was raised to *twenty shillings* per acre, by an act of the Imperial Parliament, (5 and 6 Vict., cap. 36,) with liberty to select, at the upset price, country portions put up to auction and not

bid for, or on which the deposit had been forfeited. The land was offered for sale, in quantities of not less than a section, or one square mile = 640 acres. In 1843, a select committee of the Legislative Council of New South Wales was appointed, to enquire into and report upon the upset price of land. In the same year, and in 1845, "immigration reports" were laid before the Council. In the resolutions and petitions of the Council, founded on these several reports, urgent protests were made against the continuance of a policy which had been productive of the disastrous results of annihilating the land fund, and simultaneously depriving the colony of capital and labour, by which a series of social revolutions, and an unparalleled depreciation in the value of property were, in a great measure, to be attributed. It was stated, in this year, that about 5,000,000 acres had then been alienated from the crown in New South Wales; of these, about 3,500,000 acres had been granted, and about 1,000,000 acres had been sold, at a price of about 5*s.* per acre.

By an order of her Majesty in Council, dated London, 9th March, 1847, the lands of New South Wales were divided into three classes, according to their situation, to be denominated respectively—(1.) the *settled*; (2.) the *intermediate*; and (3.) the *unsettled* districts. The *first* comprised the settled and proclaimed counties of 1st January, 1838, and the counties of Macquarie and Stanley; also lands within three miles distance from any part of the sea coast, or two miles from certain parts of the rivers Glenelg, Clarence, and Richmond, or ten miles from the towns or townships of Portland, Alberton, Eden, Bathurst, Wellington, Macquarie, Ipswich, and a town at the head of the navigation of the Clarence river. The *second* comprehended the counties to be proclaimed on or before 31st December, 1848; and the *third*, all the other lands in the territory of New South Wales. [In this enumeration, the references to Melbourne and the Port Phillip districts have been omitted, as this portion of Australia is to be formed into a distinct colony.]

Under this order, the governor is empowered to grant leases or runs of land in the unsettled districts, for any term not exceeding fourteen years' duration, for pastoral purposes, with permission for the lessee to cultivate so much of the land in the said run as may be necessary to provide grain, hay, vegetables or fruit, to the amount

required for the use of the family and establishment of the lessee, but not for sale or barter. The rent to be proportioned to the number of sheep or cattle which the run may be enabled to support; each run to be capable of carrying at least 4,000 sheep, or an equivalent number of cattle, and not in any case to be let at a lower rent than £10 per annum, to which £2 10s. per annum shall be added for every additional 1,000 sheep, or equivalent number of cattle, which the run may be capable of carrying. A commissioner of crown lands to estimate the capabilities of the run. During the continuance of the lease, no person but the lessee to be suffered to purchase any of the run; but he to be allowed to buy the whole, or portions of not less than 160 acres, at a price of not less than 20s. per acre. On the *intermediate lands* the governor may grant leases as above for not more than eight years; but at the end of each successive year of the lease, these runs may be offered for public purchase, subject to sixty days' notice to the lessee. In the *settled districts* the governor may issue grants or depasturing leases for one year, without interference as to time of disposal of said lands by sale or lease.

In 1847 (11th September), a select committee of the Legislative Council of New South Wales on *immigration*, stated, that "the land fund—the source from whence any amount of expenditure incurred in immigration might have been defrayed, has been annihilated, in consequence of the determination to carry out the system of Mr. E. G. Wakefield; and the remonstrances of the colony against this ruinous system

have been unheeded or misunderstood." The committee state, that—

"For a series of years the growth of the colony was uniform, progressive, and uninterrupted. From 1833 to 1840, the sum realized by the sale of the waste lands was upwards of £1,000,000, and by the expenditure of this amount 80,000 souls were introduced. Under this system, the population became more than doubled in a period of eight years. In 1839, it was the policy of the imperial government to raise the upset minimum price of land from 5s. to 12s., and subsequently to £1 an acre. This act may be regarded as one chief cause of the disasters with which the colony has since been visited, and of its present depressed condition. From £300,000 a-year the land revenue fell to £8,000, and immigration ceased; the sources from whence it had been defrayed, having been thus suddenly arrested."

In 1847 (23rd July), a select committee, consisting of ten members of the Legislative Council of New South Wales, was appointed to inquire into and report upon what ought to be the minimum upset price or prices of land in the various counties and districts of New South Wales. On 27th September, 1847, the committee made a report, of which the following is an abstract. All the witnesses examined, whether favourable or unfavourable to the maintenance of a high minimum price, agreed that 20s. does not in any degree represent the exchangeable value of an acre of land in New South Wales; and that, therefore, the declaration of the Imperial Parliament, that land shall not be sold till it realises £1 per acre, is a declaration that land shall not be sold until it realise more than it is worth; or, in other words, that except in particular instances, land shall not be sold at all. In confirmation of this statement, the following table is adduced:—

Prices of Crown Lands and Quantities Sold from 1837 to 1846, both inclusive.

Year.	5s. per acre, Country.	12s. per acre, Country.	20s. per acre, Country.	Upwards of 20s. per acre.		Special Surveys, in Acres.	Total Acres Sold.	Total Amount for Lands sold.
				Town.	Country.			
1837	368,483	—	—	212	—	—	368,695	£121,962
1838	315,059	—	—	228	30	—	315,318	128,865
1839	249,896	30,218	2,664	2,785	351	—	285,915	166,713
1840	68,873	111,720	2,058	5,525	1,291	—	189,468	324,072
1841	—	16,430	3,310	248	153	66,199	86,341	92,636
1842	—	4,898	1,340	170	471	15,023	21,903	18,312
1843	—	616	3,205	157	717	121	4,817	12,205
1844	—	—	3,822	245	190	—	4,259	9,174
1845	127	—	4,440	1,754	945	—	7,267	18,025
1846	—	103	2,841	282	3,791	—	7,018	27,700
1847	. . .	. . .	. . . No	detailed	returns.	. . .	. . .	. . .
1848								
1849								
1850								
Total	1,002,440	163,985	23,683	11,611	7,942	81,343	1,291,006	£919,669

Note.—Roods and Perches, and Shillings and Pence are excluded

From the foregoing table the committee adduced the facts—

“That the sum realised by sales of land in 1846 is less by £3,000 than one-fourth of the sum realised from the same source in 1837. It will also be observed, that in the five years which have elapsed since the raising of the minimum price to £1 an acre, the whole sum realised by land sales is not quite £80,000, or two-thirds of the sum realised in the single average year 1837; and the whole number of acres sold about 45,000, or less than one-eighth of the number sold in 1837. The result is more strange, when it is observed, that in 1837 the population of the colony amounted to 85,000 persons, while, in 1846, the population amounted to upwards of 196,000. Thus by unwise legislation has the permanent settlement been retarded in proportion as the demand for it has increased; and thus is the fallacy, that land can be made saleable at this price by the introduction of population, practically refuted. But it has been said by Sir George Gipps, that it is to the insolvency, which was unfortunately so general a few years ago, and not to the high minimum price, that the cessation of land sales is to be attributed. If so, we may expect to find the same paralyzing influence extended to all markets as well as the land market. The comparison of 1837 with 1846 will completely show the fallacy of this suggestion. In 1837 the value of exports from the colony was £760,000. In 1846 the value was £1,481,000, or nearly double. In 1837 the ships entered inwards were 400, of the burden of 80,000 tons. In 1846 the ships entered inwards were 767, of the burden of 141,000 tons. In 1837 the proceeds of sales by auction were £321,000; in 1846, £414,000. In 1837 the coin in the treasury, military chest, and banks, was £427,000; in 1846, £827,000. Thus, while our exports, our shipping, our circulating medium, and our population have doubled; while the proceeds of sales by auction have increased one-fourth, the proceeds of sales of land have decreased by more than three-fourths.”

The inference deduced from these facts by the committee is that while—

“The producer of colonial exports is content to sell his commodity at the price which it will bring, the shipowner looks only for the current rate of freight; the importation of capital is regulated by the rate of exchange; but the government, the great proprietor of land, refuses to regulate its dealings by these principles, repudiates the doctrine of supply and demand, and insists upon holding this commodity, of which it has practically the monopoly, till it realise a price, of obtaining which no practical man can see the probability or even the possibility. Thus, while every other branch of industry is carried on with the greatest activity and success, the settlement of the country, to which they ought all to be considered as subsidiary, stands still, and the mind is astonished by the anomalous spectacle of a colony active, enterprising, and energetic in all things, except the one alone for which it was founded—colonization.

“It seems impossible to reconcile this system not only to any views of sound policy but to any policy at all. If the government regard these lands as a mere vehicle of revenue, as the means of raising the largest possible sum, narrow and unstatesman-like as such a view may be, this is not the way to carry it out. The figures above quoted show that the price is so exorbitant, that every other element of wealth in

the country may double and leave it still a virtual prohibition. How often this multiplying process is to be repeated before the pressure of population and the increase of wealth will render these lands saleable at £1 an acre it is impossible to say; but to judge by the moor lands of England, and the bogs of Ireland, the period is yet extremely remote. It must also be remembered, that even if the government should succeed in selling land at £1 an acre twenty years hence, for which now only 5s. could be obtained, the government, allowing for compound interest at the rate of interest which money now commands in the colony, is considerably a loser; add to this, that by destroying the land fund, the government is not merely foregoing a revenue which would be cheerfully paid and easily collected, but it is destroying future revenue by arresting the influx of that labour from which land derives so much of its value. It is not merely refusing to sell a commodity, but it is depreciating that commodity for ever. The supply of land which may become saleable by the government is, for all practical purposes, infinite. What quantity will become saleable, depends upon the increase of population. Government, therefore, as a mere dealer in land, has a direct interest in selling so much of it as will keep the tide of population continually flowing towards its yet unsold possessions.

“It is also the interest of government to attract capital. In this also it has signally overreached itself. The principle of a uniform fixed price contains in it this objection, that that price must be tolerably high, since upon it alone the government relies to protect its interests, but it has the countervailing advantages of certainty of amount and facility of operation. The principle of sale by auction has not these advantages, but it offers to the capitalist the attraction of referring not to any arbitrary standard, but to fair competition to fix the value. The government has rejected all that is attractive in each of these systems, and retained only what is repulsive. Enough of the fixed price is retained to make the purchaser sure that he will not get the land cheap; enough of the principle of competition to make him uncertain whether he shall get it at all.

“The facilities of steam and railway communication are gradually drawing mankind together, and countries possessing wild lands for sale, are beginning to enter into competition with each other. It is becoming daily more impossible to regard this as an isolated question. In determining the price of land, the competition of other countries ought not to be left out of sight. At the Cape of Good Hope land can be obtained for one-tenth, in Canada for one-fourth, and, as it appears recently, in the United States, for one-fortieth of the sum demanded for a like quantity here. In utter defiance of the principles of political economy, it is expected that persons will give for our poor and inaccessible land four, five, ten, or forty times the price at which nearer and more accessible land may be obtained. It is assumed that one acre of land in Australia equals in value four in Canada, five in the United States, ten at the Cape of Good Hope, and forty in the territory recently ceded to the United States by the Chactaw Indians. Your committee apprehend, that as regards the greater part of the lands of this colony, it is perfectly immaterial whether the minimum price fixed be £1 or £20 an acre. The former price is shown, by reason and experience, to be utterly unattainable, and the latter is no more.

“Your committee would wish to be understood as

by no means undervaluing the great advantages derived by the colony from pastoral pursuits, but they are desirous of expressing their opinion that the home government, by prohibiting the sale of land, has given an undue stimulus to those pursuits, and undue discouragement to agriculture and settled industry. The prohibition of the purchase of land has aggravated that tendency to dispersion which it was designed to counteract. The true policy, in the opinion of your committee, is neither to stimulate nor check this tendency to dispersion, which is the natural precursor of that state of society in which the tendency to concentration arises. Unhappily, the government has not observed this rule. In its anxiety to concentrate the population, it has placed a price on land which rendered it impossible for those who occupied it to occupy as purchasers. The occupation has been conceded, the proprietorship has been withheld, and thus has the industry of the colony been forced into the channel most consistent with occupation without title, and the policy which ambitiously aimed at forcing the colonists prematurely to become villagers and agriculturists, has resulted in compelling them to become shepherds and herdsmen. Had the prohibitory price thus imposed been the result of a sincere though mistaken conviction, your committee, while deprecating its impolicy, could not have murmured at its injustice. But it is now notorious in the colony, and can be proved by unquestionable evidence, that it was not with a view to the welfare of New South Wales, but of South Australia, that this obnoxious law was passed. Colonel Torrens and his brother commissioners, the founders of the South Australian colony, felt that it would be impossible to obtain £1 an acre for land there, while land of the same quality could be obtained at 5s. an acre here. They felt that whatever were the merits of their scheme, it would not bear the test of the free-trade principle of competition, and they sacrificed, without remorse or hesitation, the present and actual interests of the older colony, to the future, and, as it has turned out, visionary prospects of the younger. Thus it happens, that 200,000 persons are impoverished, that their interests may not stand in the way of the imaginary interests of 25,000; and while colony after colony has been emancipated from the £1 an acre system, New South Wales has been unable to obtain her deliverance, precisely because, to her, that deliverance would be most valuable. Van Diemen's Land is of too small extent—New Zealand is too distant—to impair, by their competition, the working of the £1 an acre system in South Australia. If the land of New South Wales were rich, the continuance of the price would be a matter of indifference; if the land were small in quantity, the reduction of the price would be unimportant; it is the great quantity and poor quality of the land—the very causes which render the high price ruinous to New South Wales—that constitute its principal attractions in the eyes of the South Australian commissioners."

From a return made to government, up to June 30th, 1836, it appears that the land comprised within the then nineteen counties of the colony, was upwards of 25,000,000 acres, of which only about 5,000,000 acres had been alienated; showing that there was, consequently, abundance still left within the settled districts for cultivation, if required. The best lands had been selected by those

who received grants, the next best put up to sale by government at 5s. an acre; after selections had been made for several years at this price, the third best were offered at 12s. an acre; and, finally, the refuse or remainder of these grants and sales was put up for sale by auction at 20s. per acre. (Evidence before Legislative Council, 14th August, 1847.)

After these forcible arguments, the Legislative Council committee proceed to show, with a warmth which is, perhaps, only too excusable, that it would have been happy for the colony, if the ruin of her land fund—the dispersion of her people—the stoppage of immigration—and the dissemination of a just spirit of discontent, had been the only results of this high minimum price. A party arose in the colony, a class termed "squatters," who, forbidden by the policy of the government to buy land, were forced to occupy it, and did so, under the authority of the government, on a lease of 1d. per acre, until the lands thus occupied were purchased at £1 per acre. Hence, the squatters—men of intelligence, education, property, and good family in England, who had made New South Wales their home—began to feel that they had a vested interest in maintaining the prohibitory price, as a guarantee that their occupation would not be disturbed; the result is, that "the land possessions of the British crown in New South Wales have been in a manner *alienated*." The settlers object to the land-orders which authorise leasing at 1d. per acre, because they confiscate the lands of the colony; the squatters approve of them, because they see no limit to the term of their occupation; under them, temporary occupation is consequently equivalent to permanent alienation—thus the system has led to grants of land on the most lavish and extravagant scale. By the process now in operation, it is alleged that all the desirable land within the nineteen counties, and *beyond the settled districts*, viz., about 1,800,000 acres, have been, in reality, bestowed on about 1,800 persons, at the rate of 100,000 acres per head, in a country where there is one inhabitant to every 100,000 acres, and has coupled with this premature appropriation, a regulation prohibiting agriculture. Thus, it is asserted, dispersion is enforced; co-operation, the division of labour, religious and secular instruction, are all out of the question; landed property is accumulated in the hands of a few to the

exclusion of the many; and the high minimum price of land (20s. per acre) has operated as a bar to the natural and secure investment in the soil of the surplus capital of the colony, hazardous speculation has been consequently encouraged, and capital forced into other and less legitimate channels. The opponents of the high minimum price of land do not deny the benefits arising from the sale of waste lands; or that a sum of nearly £1,000,000 was raised by such sale in New South Wales, in ten years, whereby 50,000 immigrants have been introduced into the colony; but they contend, that of the gross proceeds of the land sales (£920,000), £835,000 were received during the first five years of the period, when the price of land was under 20s. an acre, and but £85,000 during the second period of five years, when the minimum price was 20s. an acre; thus, if the sum raised from land has been the means of introducing 50,000 immigrants, 46,000 have been introduced by land put up under 20s. an acre, and 4,000, only, by land put up at 20s. an acre. In other words, had the price remained unaltered, the colonists might have raised £2,000,000, instead of £1,000,000, and introduced 100,000 immigrants instead of 50,000. It is in evidence, that no land has been purchased for grazing purposes at 20s. an acre; according to some witnesses, 10s. per acre would be a fair price for arable, and 5s. per acre for grazing land. According to Mr. De Salis, 2s. 6d., and a rent equivalent to four per cent. would be a proper valuation. Mr. Ogilvy thinks 1s. an acre sufficient. There is much land on which a rabbit could not feed, and 3s. an acre would be gladly received for 10,000 acres in the county of Macquarie. Many large tracts of a deep dark rich soil are covered with dense forests, which are not likely to be cleared for years to come.

Mr. Justice Therry, in his evidence before the House of Lords (9th June, 1848), being asked to what he attributed the considerable falling off in the land sales of New South Wales, of late years, answered—

"Principally I should attribute it to the minimum price of land being £1 an acre, and to the great extent to which, in consequence of this price, the squatting system has extended, as well as to the great facility afforded for the occupation of land without purchase; that naturally prevents the sale of land. If a person can occupy and use land without buying it, and buying too at a price beyond its value, it is plain he will not purchase it."

The witness proceeded to say, that so far

from 20s. upset price for land having a tendency to secure the concentration of the population, as was alleged would be the case, it had quite the contrary effect, and had promoted dispersion, by a system which operates as a prohibition upon the sale of land. This experienced judge fully corroborated the statements of the Legislative Council Committee, and asserted, that "the squatters have an occupation which they consider as almost equivalent to the proprietorship of the soil: for all practical purposes, they have an ownership of the land almost as if they had purchased it." *Four* acres to *one* sheep, would entitle the squatter, having the smallest required number of sheep (4,000), to 16,000 acres of land; and it must be evident he could not afford to pay 20s. an acre, or £16,000, for mere pastoral purposes.

In 1848 (29th March), the governor issued regulations for the occupation of crown lands *within the settled districts*; viz.—*First*. That holders of purchased lands within those districts may depasture stock on vacant crown lands immediately contiguous to their respective properties, but that they shall only possess a *commonage* right, to be enjoyed alike by all the holders of adjacent purchased lands, and may not erect any hut or building, or clear, enclose, or cultivate any portion thereof. *Second*. That sections of not less than 640 acres will be let, with exclusive right, for one year, at a rent of not less than 10s. per section, for pastoral purposes only. Leases not assignable, or lands to be sublet. Wood, excepting cedar, may be cut for fencing stock-yards, for fire-bote, or domestic uses. Lands open to purchase under the ordinary regulations: lessee to receive a notice of one month. The secretary of state for the colonies has authorized the local government of New South Wales to raise a loan of £100,000 for emigration purposes, on the security of the land revenues of the colony, but declined to alter the upset price of 20s. per acre for land. It is rightly deemed that any alteration in price ought to apply to all the southern colonies; and her Majesty's government propose to leave the settlement of this question to the United Assembly of all the Australasian colonies. It will, however, be a very difficult matter, owing to the interests which have grown up under the present system.

The quantity of land sold, and the proceeds thence derived, in New South Wales and Port Phillip, and the amount derived

from squatting licences, are thus shown since 1831 :—

Year.	Number of Acres Sold.	Purchase Money.	Squatting Licences.
		£	
1831		2,597	—
1832	20,860	12,509	—
1833	29,001	24,956	—
1834	91,399	47,184	—
1835	271,947	87,097	—
1836	389,546	123,049	3,680
1837	370,376	117,583	4,780
1838	316,160	115,825	6,280
1839	272,620	166,578	11,675
1840	189,787	317,251	13,300
1841	85,776	93,387	15,701
1842	10,673	19,444	16,255
1843	5,227	11,664	19,823
1844	4,260	9,016	32,031
1845	7,747	22,821	38,943
1846	7,683	30,183	42,749
1847	28,726	76,962	43,075
1848	21,480	41,919	46,903
1849}			
1850}		No returns.	

In 1848 the whole quantity of land sold in the New South Wales district was only 3,472 acres, and the sale proceeds £7,384; in the Port Phillip district, 18,007 acres, proceeds, £24,030. The revenue derived from squatting licences, in 1848, was—*within*

the settled districts, New South Wales, £1,116; Port Phillip, £383 = £1,549; *without* the settled districts, New South Wales, £26,490; Port Phillip, £18,863 = £45,353.

The subjoined table shows by whom, and the period, the government of the colony was respectively administered since its foundation on the 26th January, 1788 :—

	From	To
Captain Arthur Phillip, R.N.	Jan. 26, 1788	Dec. 10, 1792
Captain Francis Gross (Lt.-Gov.)	Dec. 11, 1792	Dec. 14, 1794
Captain Paterson, New South Wales Corps (Lieut.-Gov.)	Dec. 15, 1794	Aug. 6, 1795
Captain Hunter, R.N.	Aug. 7, 1795	Sept. 27, 1800
Captain P. G. King, R.N.	Sept. 28, 1800	Aug. 12, 1806
Captain W. Bligh, R.N.	Aug. 13, 1806	Jan. 26, 1808
Major-gen. Lachlan Macquarie.	Jan. 1, 1810	Dec. 1, 1821
Major-gen. Sir T. Brisbane, K.C.B.	Dec. 1, 1821	Nov. 30, 1825
Colonel Stuart, 3rd Reg., or Buffs (Lieut.-Gov.)	Dec. 1, 1825	Dec. 18, 1825
Lieutenant-gen. Ralph Darling	Dec. 19, 1825	Oct. 21, 1831
Colonel Lindesey, C.B. (Lt.-Gov.)	Oct. 22, 1831	Dec. 2, 1831
Major-gen. Sir R. Bourke, K.C.B.	Dec. 3, 1831	Dec. 5, 1837
Lieutenant-col. Kennett Snodgrass (Lieut.-Gov.)	Dec. 6, 1837	Feb. 23, 1838
Sir George Gipps	Feb. 24, 1838	July 10, 1846
Sir M. C. O'Connell.	July 11, 1846	Aug. 2, 1846
Sir Charles Augustus Fitzroy	Aug. 3, 1846	—

Note.—Captain Bligh was suspended as Governor on the 26th January, 1808, and from that period to the 28th December, 1809, the government was successively administered by lieutenant-colonel G. Johnstone, lieutenant-colonel Foveaux, and colonel W. Paterson, all of the New South Wales Corps, afterwards 102nd Regiment.

CHAPTER II.

TOPOGRAPHY, PHYSICAL ASPECT, MOUNTAINS, RIVERS, AND HARBOURS, COUNTIES, GEOLOGY, SOIL, MINERALOGY, CLIMATE, AND DISEASES.

NEW SOUTH WALES (so called by captain Cook, from its fancied resemblance to the South Wales of England,) occupies the eastern portion of the Australian continent; its northern and western limits are not yet definitely assigned; on the east it is bounded by the South Pacific Ocean, and on the south, by the province of Port Phillip or Victoria. For the reason just mentioned, it is at present impossible to state its area.

Physical Aspect, Mountains and Rivers.—The general features of the surveyed districts are alternate hills and valleys, mountains and plains. The "mountain belt" of Australia, already referred to (p. 370), is known in different parts of the province under distinct denominations, viz., as the Blue Mountains, in the vicinity of Sydney;

Liverpool Range, in its northerly, and the Australian Alps, in its southerly extension. This lofty ridge, which runs nearly parallel to the coast, at a distance of thirty to fifty miles, separates the waters that flow towards the sea from those that have an inland course; its mean altitude is estimated, by Count Strzelecki, at 3,500 feet above the sea. The same accurate observer states the average fall of the coast or easterly rivers at forty-eight feet in every mile; the average slope produced by the transversal spurs being ninety-six feet; and the average fall of the westerly waters, at nine feet in every mile; that of the country within seventy-two miles from the crest of the dividing range being twenty feet. The intervening space between the mountains and the sea is

occupied by a gently undulating surface, intersected by water-courses; in some places well wooded, in others covered with dense scrub, and gradually rising to the westward in groups of isolated hills, or small and broken ranges, branching out from the ridge of high land, which, winding from north-east to south-west, forms a continuous and clearly defined line visible against the horizon as far as the eye can reach. In 30° S. lat. this chain divides the sources of the river Peel, running to the westward, from those of the Hastings, flowing north-east, towards Port Macquarie; further to the south, one of its eastern spurs separates the river Manning from the river Hunter, after which, assuming a westerly direction, it divides in its windings the tributaries of the Hunter from those of the Peel. This portion of the chain, distinguished by the name of Liverpool range, is crowned by several peaks of greenstone, whose bare and unshapen tops attain an elevation of 4,700 feet. From two of these, Mount Oxley and Mount M'Arthur, the view is extensive and very pleasing; to the westward of them, at the point where it divides the river Goulbourn from the Talbrager, the chain turns suddenly to the south-east, but resumes its south-westerly direction at a locality rendered remarkable by the peaks of Coricudgy and Payan, and the sources of the Colo and Cudgegong. At Cullenbullen the chain is granitic, and throws off a remarkable basaltic spur to the eastward, whose numerous and intricate ramifications render the Blue Mountains so difficult to explore, and even to approach. Mounts Adine, Clarence, King George, and Tomah, crown the northern and loftier branch; mounts Hay and King's table land, the southern. "Between these ranges," says Count Strzelecki, "lie yawning chasms, deep winding gorges and frightful precipices. Narrow, gloomy, and profound, these stupendous rents in the bosom of the earth are inclosed between gigantic walls of sandstone rock—sometimes receding from, and sometimes frightfully overhanging the dark bed of the ravine, and its black silent eddies, or its foaming torrents of water." "Everywhere," he adds, "the deep recess is full of danger, and the issue almost impracticable. At the foot of Mount Hay, the river Grose flows through a sandstone ravine, the perpendicular depth of which is 1,500 feet." To return to the main range—at the part from whence this spur branches out, it is composed of sienite

and granite; thence extending for a few miles to the south-west, it gives rise to Cox's river, and forms the Walerawang and Clwyd valleys; it then takes a south-east direction, and is known by the name of the Honeysuckle range; the mean elevation of its crest is 4,050 feet; twenty-five miles beyond, bending again to the south-west, it rises to 4,500 feet, its character alters, and the eye rests on naked sienitic peaks, instead of richly wooded greenstone summits. A spur shoots off to the northward, which, in its windings, separates the river Macquarie from the Abercrombie, while the chain itself becomes lower, less precipitous, and more wooded. At Mount Fitton, about the source of the Wollondilly, and at the head of Lake George, this character again somewhat alters. At the last named locality, a westerly spur, composed alternately of serpentine and porphyries, divides the tributaries of the Murrumbidgee from those of the Lachlan, winding its way through a very broken country. Further on, beyond Lake Bathurst, another branch stretches to the north-east, but the chain continues its southerly course for about sixty miles; then changing again to south-west, it assumes a bolder aspect, its greenstone and sienitic crest at times resembling Alpine table-land; and others, rising in clearly defined and denti-form summits, capped here and there by snow, even in the midst of summer. The remarkable spurs which shoot out from both sides of the ridge at this point, are distinguished by the same marked features; that which, passing to the eastward, flanks the river Shoalhaven from its source to its mouth, renders the whole track over which it passes broken and intricate; and that, which running in an easterly direction, winds between the rivers Murrumbidgee, Coodra-bidgee, and the Doomut, is of very striking formation, its lofty ridges enclosing the channels of the rivers just mentioned, whose sources are marked by a cluster of broken peaks. We now arrive at that portion of the range denominated the Australian Alps, of which, however, only one remarkable eminence is included in the limits of New South Wales, that one named Mount Kosciuszko by its explorer, Count Strzelecki, is described by him as one of those few elevations, the ascent of which, far from disappointing, presents the traveller with all that can remunerate fatigue. Its altitude of 6,500 feet, raises it above the adjacent mountains, and the view from its summit

embraces 7,000 square miles. Beneath the feet, looking from the very verge of the cone downwards almost perpendicularly, the eye plunges into a fearful gorge 3,000 feet deep, in the bed of which the sources of the Murray gather their contents, and roll their united waters to the west.

No known volcanic mountain exists in New South Wales, unless we reckon as such an eminence named Mount Wingen, situated near the sources of Hunter's River, where the process of combustion was, in 1818, discovered to be going on. Two visits were made to it in 1830 and 1831, by the Rev. C. P. N. Wilton (then chaplain at Newcastle), who published, in the *Australian Almanac* for 1832, the interesting account of which the following is an abstract:—

"Mount Wingen is situated on the south-eastern side of the dividing range which separates the lands of Hunter's River from Liverpool Plains, in $31^{\circ} 54'$ S. lat., $150^{\circ} 56'$ E. long.; and the elevation of the portion of it under the process of combustion cannot be less than from 1,400 to 1,500 feet from the level of the sea. At the period of my first visit, in the beginning of last year, this comprehended parts of two declivities of one and the same mountain, composed of compact sandstone rock. The progress of the fire had previously been down the northern and highest elevation, and it was then ascending with great fury the opposite and southern eminence. From the circumstance of its being thus in a hollow between two ridges of the same mountain, a former visitor was probably induced to give the clefts in the mountain the appellation of a crater; but, the fact is, the rock, as the subterraneous fire increases, is rent into several concave chasms of various widths, of which I had an opportunity of particularly examining the widest. The rock, a solid mass of sandstone, was torn asunder about two feet in width, leaving its upper and southerly side exposed to view, the part so torn asunder having split down, as it were, and sunk into a hollow, thus forming the concave surface of the heated rock. On looking down this chasm to the depth of about fifteen feet, the sides of the rock were perceived to be of a white heat, like that of a lime-kiln, while sulphureous and steamy vapours arose from the aperture, amidst sounds which issued from a depth below, like blasts from the forge of Vulcan himself. I stood on that portion of the rock which had been cleft from the part above,

and on hurling stones down into the chasm, the noise they made in the fall seemed to die away in a vast abyss beneath my feet. The area of the mountain, over which the fire was raging, was about an acre and-a-half in extent. There were throughout it several chasms varying in width, from which are constantly emitted sulphureous columns of smoke, accompanied by brilliant flame, the margins of these being beautified with efflorescent crystals of sulphur, varying in colour from the deepest red orange, occasioned by ferruginous mixture, to the palest straw colour, where alum predominated. A black, tarry, and lustrous substance—a sort of bitumen—abounded on the edges of several of the clefts. Specimens of this were with difficulty obtained, from the intense heat under foot, and the suffocating quality of the vapours emitted from the chasms. No lava or trachyte of any description was to be met with, nor was there any appearance of coal, although abounding in the vicinity. The mountain has evidently been on fire for a great length of time, several acres above the part now under combustion, on which trees are standing of a great age, having, as it were, been steamed, and many of the stones upon it bearing the appearance of vitrification. The fire is still raging, and will probably continue to do so with increasing fury. Materials from beneath from time to time become ignited, whether by electricity, or other unknown cause, and the expansive power of the heat and steam, shiver and split into huge masses the solid rock of sandstone, and thus form continued chasms. The sulphureous and aluminous products of the mountain have been successfully applied in the cure of the scab in sheep."

About four miles along the shore from Newcastle, towards Red-head, the cliff was also observed, in 1828, to be on fire, evolving sulphureous vapours; and a beautifully crystallized mineral, which appeared, on examination, to be muriate of ammonia intermingled with sulphur, was collected from the margin of the crevices. This fire, however, in 1830, became extinct;—unlike that on Mount Wingen, of his second visit to which Mr. Wilton thus speaks:—

"The fire, since the period of my former visit, had, I found, been by no means inactive, having extended over a surface exceeding two acres, and was now raging with increased fury up the eminence to the S. and S.S.W., and also on the hitherto

extinct portion of the mountain—the northern elevation. There were still most splendid crystals of sulphur on the margins of the more extended crevices, where the fire was burning with a white heat, and of ammonia on those of the less, from both of which suffocating fumes were incessantly evolving. The fire continued roaring beneath, and stones thrown down into the chasms resounded to a great depth in an interior abyss. The scene of disruption, the rocks of solid sandstone cleft asunder, the innumerable fractures made on the surface, the falling in of the strata, the half-consumed prostrate trunks of trees, and others only awaiting the slip of the rock beneath them to fall in their turn, the pernicious vapours arising around, amidst the roaring of the internal fires, and the white and red heat of the burning crevices, present an appearance on which the beholder cannot fail to gaze with wonder, and, at the same time, to lament his inability to account with any degree of certainty for the first natural cause of the spectacle before him.

“At a little distance from the burning portions of Wingen, I picked up several amorphous specimens of cornelian, white, pinkish and blue; angular fragments of ribbon and fortification agates, and balls of agate, some of them filled with crystals, varying from the size of a pea to that of a hen's egg, and others of a blueish-white and clouded colour, having spots of white dispersed throughout them, which, if cut and polished, would present a very beautiful variety of this mineral. Mount Agate, also in the neighbourhood of Wingen, presented me with some fine specimens as well of agate (fortification and ribbon occurring in the same specimen,) as fragments of white and blueish cornelian; and had not the grass upon the mountain been so long and thick as it proved to be, I should, doubtless, have collected much finer.

“Several of the agates collected from Mount Wingen, upon examination, were found to have their surfaces crusted over with iron; some of those from Mount Agate with native copper; while others, from the same locality, presented a most beautiful auriferous appearance. On Mount Wingen we found, within but a few yards of that portion of it which is now under combustion, the cast of a bivalvular fossil shell in sandstone, a species of *terebratula*; other similar specimens have been met with on another part of the mountain. Only two specimens

of organic remains, of the nature of petrified bone, have hitherto been discovered in the neighbourhood of Mount Agate; viz. the sacrum of some large animal, on the Holdsworthly downs, and the second cervical vertebra of another, about ten miles west from Merton; but, in neither instance was the petrification imbedded in the subjacent strata, but merely lying on the surface of the soil; and, therefore, most probably, contemporary with the petrified wood, which is found scattered very abundantly over this tract of country. Near the chain of the Kingdon Ponds, forming one of the sources of the Hunter, and rising in the dividing range a few miles N. by W. from Mount Wingen, are stumps of trees standing upright in the ground, apparently petrified on the spot where they formerly grew. In some places the wood is strongly impregnated with iron. About three miles along the coast south of Newcastle, in an upright position, at high-water mark, under the cliff, and beneath a bed of coal, was also lately found the butt of a petrified tree, which, on being broken, presented a fine black appearance, as passing into the state of jet; and on the top of the cliff at Newcastle on which the telegraph stands, imbedded at about a foot beneath the surface, lying in a horizontal position, and nearly at right angles to the strata of the cliff, the trunk of another, finely grained and white—both specimens being traversed by thin veins of chalcedony. The coal which is exposed to view on the face of the cliffs, is of the independent formation, and appears to run generally in three parallel horizontal beds; but in some places with a varying dip. It alternates, in one part of the cliff, with slaty clay, sandstone, and shale, with impressions of leaves; at another, with mill-stone grit and a hard chertzy rock. Nodules of clay ironstone, and trunks and stems of arundinaceous plants in ironstone, are seen in abundance on the alternating strata of the cliff; and in one place a narrow bed of ironstone, bearing impressions of leaves, is remarkable; while thin laminæ of the same mineral, the surface of which is traversed by square and variously-shaped sections, are seen on several parts of the shore, both in the face of the cliff parallel with the beds of coal, and extending into the sea, forming the strand at low water.”

The following table (derived from Count Strzelecki's valuable work), shows the altitudes, in English feet, above the level of the sea, of the most remarkable mountains,

lakes, watercourses, plains, and stations in New South Wales and Port Phillip or Victoria, as determined by the barometer; those included in Port Phillip being given

here with the idea of affording a more just view of the relative elevation of the most remarkable positions in each province:—

Name of Heights.	Feet.	Name of Heights.	Feet.
Peel Plains, New England	1,800	Guantewang, north-east of Wellington Vale	1,410
Mount Mitchell	4,120	Camden, estate of James M'Arthur, Esq.	248
Mount Lindessy	5,700	Mount Prudhoe, summit above the road	1,006
Mount Sturt	3,735	Stone Quarry Creek, below the bridge	482
River Condamine, 28° 10' S. lat., 151° 40' E. long.	1,402	Crisp's Inn, Myrtle Creek, Camden County	783
Rocky Creek	1,717	Bed of Myrtle Creek	643
Brushy Valley, 28° 20' S. lat., 151° 20' E. long.	1,504	Bargo River, Ford	771
Apple Tree Flat	1,091	Lapton's Inn	1,206
Dumaresq River, 28° 55' S. lat., 150° 40' E. long.	840	Little Forest Hill	1,923
Glen River, 29° S. lat., 151° 35' E. long.	1,049	Cutter's Inn, Camden County	1,967
Gwydir River, 29° 35' S. lat., 150° 25' E. long.	895	Mittagong Range [summit]	2,454
Mount Hundawar, or Harkwick, 30° 15' S. lat., 150° 25' E. long.	2,545	Cordeaux Farm	2,222
Barrow Valley, 30° 40' S. lat., 150° 20' E. long.	808	Cockatoo Hill	2,356
Wallambora Ford, 30° 40' S. lat., 150° 25' E. long.	1,016	Berrima Inn	2,096
Mount Bathurst, 31° 5' S. lat., 151° 50' E. long.	4,000	Bed of Wingecarabee River	2,058
Glen Apalet River, 31° 5' S. lat., 152° E. long.	1,000	Bed of Black Bob's Creek, under the bridge	2,051
Bathurst Cataract, New England	235	The Kentish Arms Inn, three miles beyond Mid-way Rivulet	2,028
Beckett's Cataract	150	Bed of Midway Rivulet, Camden County	2,003
Mount Sea View	6,000	Summit of Stony Hill	2,400
Macquarie Cataract, 31° 55' S. lat., 148° 10' E. long.	680	Wombat Brush, terrace above Paddy's River	2,128
Summit of Lapstone Hill, Cook County	747	Ford of Paddy's River, Camden County	1,856
Springwood, depot, Cook County	1,147	Arthursleigh, estate of H. M'Arthur, Esq., Argyle Co.	1,977
Station on the Mount Road, Blue Mountains	1,707	Norwood, Argyle County	2,116
Caley's Repulse, Cook County, Blue Mountains	1,868	Rossville House	2,057
Twenty-four Miles Hollow, Cook Co., Blue Mountains	2,738	Breadalbane Plains	2,278
King's Table Land, Cook County, Blue Mountains	2,790	Summit of Hill, south of Wallagoray	2,606
Stone Quarry, one mile beyond King's Table	2,882	Tarrago Ponds, Argyle County	2,264
Weather Board Hut	2,844	Gidleigh, estate of Captain P. P. King	2,368
Mount Hay	2,425	Sugar Loaf, or Squall Hill, near Gidleigh	3,288
Mount Tomah	3,240	Big Creek, near the Gap through the Black Range	2,979
Foot of Mount Victoria, Flagan's House	2,607	Head of Big Creek and Stony Creek	3,136
Mount George	3,620	Summit of Prospect Hill	3,275
Bridge over Butler's Rivulet, Vale of Clywd	2,188	Last Hill	3,176
Mount York, Vale of Clywd, Blue Mountains	3,440	Wollondilly River, below Rossville	1,971
Foot of Mount York, Collet's Farm	2,180	" at the Junction of Paddy's River	1,840
Mount Adine	3,736	" at the Ford of Arthursleigh	1,830
Ford at Cox's River, Vale of Clywd	2,052	" at Detley Crossing Place	1,752
Fish River, on the road to Bathurst	3,220	Yass River Rivulet	1,311
Military Station, Blue Mountains	3,010	Nackie Nackie Hill	2,242
Badger Brush Ridge	3,290	Mount Kosciuszko, Australian Alps	6,500
Police Station, Dividing Range Bathurst	2,910	Mount Dargal	5,490
Cox's River, before reaching Blaxland's	2,266	Mount Pinnabar	4,100
Mount Blaxland [the highest summit]	3,256	Cowrang Creek	1,350
Jock's Bridge	2,921	Dividing Range in the Omeo County	3,800
Hill beyond Jock's Bridge	3,496	Source of the Mitta-Mitta River	1,850
Bathurst Town	2,310	Lake Omeo	3,100
Summer Hill, Frederick Valley	3,010	Second branch of Mitta-Mitta River	1,900
Boree Plains	1,560	The average height of the flats in Gipps' Land	210
Mount Canoblas, Wellington County	4,610	Range between Gipps' Land and Port Western	2,510
Macquarie River, at Wellington	1,439	Mount Wilson, Wilson's Promontory	2,350
Captain Ryan's, Boree Station	1,992	Dutson, a sheep station of P. King, Esq., lat. 35° 27', long. 147° 53'	1,844
Molongorang (Mr. Passmore's)	2,062	Ellerslie, sheep station	1,266
Heregal (Mr. Maxwell's Station)	1,616		

RIVERS, CREEKS, AND HARBOURS.—The rivers of Australia, not even excepting the Murray, bear a very much smaller proportion to the size of that continent, and occupy a far less prominent geographical position than do those of any other country of similar extent, and they afford very limited communication between the coast and the interior. Of them, therefore, and for somewhat similar reasons of the creeks, lakes, and lagoons of New South Wales, a brief notice may suffice, especially as many of them have been already alluded to in the section on inland exploration; but this notice it may be well to preface

with the warning given by captain Sturt to those of his readers not conversant with the peculiarities of Australian watercourses. "A creek," he says, "is not always an arm of the sea. The same term is used to designate a watercourse, whether large or small, in which the winter torrents may or may not have left a chain of ponds. Such a watercourse could hardly be called a river, since it only flows during heavy rains, after which it entirely depends on the character of the soil through which it runs, whether any water remains in it or not." "A lagoon is a shallow lake, it generally constitutes the

back water of some river, and is speedily dried up."

The number of constantly flowing streams in New South Wales is very limited, but an all-wise Providence has in a most remarkable manner provided a remedy for this deficiency by the peculiar construction of the channels of the greater part of the rivers, which form a succession of deep reservoirs, being in fact a connected series of ponds or water-holes. This wonderful provision for the exigencies of animal existence is rendered the more striking by the character of the Australian aborigines, whose want of constructive ability manifested in so many respects, clearly indicates their incapacity of discovering a means by which the superabundance of one season might be made to supply the insufficiency of another.

The first stream of importance explored by the early settlers at Sydney Cove, and which, until the discovery of the Murray, was the broadest fresh water stream known in Australia, was named by governor Phillip the Hawkesbury. Its course, when traced inland from Broken Bay, where it disembogues, becomes extremely tortuous, the distance of Windsor (a town built upon it,) being not more than thirty-five miles from the sea in a direct line, but by the windings of the river, 140 miles; the rise of tide is about four feet, and the water fresh forty miles below Windsor, at which place it is of considerable size, and navigable for vessels of 100 tons for four miles above the town. A little higher up it is joined by a mountain stream called the Grose, which issues from a remarkable cleft in the Blue Mountains, in the vicinity of the pretty town of Richmond, about forty miles from Sydney. The Hawkesbury, while flowing along the base of these mountains, is fed by numerous tributary torrents descending from narrow gorges, which after heavy rains cause it frequently to overflow its banks as it approaches the sea; in one instance it rose, near the town of Windsor, ninety-three feet above its ordinary level.* Broken Bay extends inland to a considerable distance, and is divided into many creeks and inlets, forming excellent havens, two of which, according to Phillip, are capable of containing the whole British navy. The Hawkesbury, previous to its receiving the Grose, is called the Nepean, or rather it is a continuation of that river, which, rising in Camden country, forms the boundary for a while between that county

and Cumberland, and subsequently between the counties of Cumberland and Cook. The scenery along the Nepean is magnificent; immediately beside it the Blue Mountains rise in frowning majesty, to a perpendicular height of nearly 3,000 feet, while along the fertile borders of the stream are fields of wheat, barley, maize, bran, peas, clover, &c., to the extent of several thousand acres. The point at which I first saw the Nepean river, was at the estate of Mr. S. Terry, the wealthy emancipist previously mentioned. As far as the eye could reach, nothing could be seen but the yellow waving corn, save when the view was bounded by the gigantic buttresses of the mountain barrier. I never beheld a finer farm in Europe than Mr. Terry's; and while enjoying the cheerful scene, I could not but feel proud of belonging to a nation, who through her outcast and erring children had extracted from the stubborn soil of a distant land such admirable results. The Macdonald and the Colo are the chief tributaries of the Hawkesbury, and the Warragamba of the Nepean. The Warragamba (a continuation of the Wollondilly) receives the Cox twenty miles to the southward of Emu Plains. The Cox pursues its course through a wild region, and in parts could be traced only by scrambling on foot, or by following out the several extremities of the mountain ranges which overhang its rocky channel.

Hunter River disembogues in the sea at the harbour of Newcastle, Port Hunter, a safe haven, sufficiently capacious for vessels of 300 tons burthen; fifty-nine miles N. 22° E., from the entrance of Port Jackson. The Hunter, formerly called the Coal River, is formed by several streams flowing from the Blue Mountains, and is navigable for fifty miles from Newcastle, by small craft of thirty to forty tons burthen. Beyond this distance there are several shallows, which only admit the passage of boats over them. There are three branches to the Hunter, called the Upper, the Lower, and the Middle; the two former are navigable for boats for about 120 miles, and the latter for upwards of 200 miles, but the branches are all liable to sudden and terrific inundations, owing to the rapid descent of torrents from the Blue Mountains. In consequence of the fertility of the soil along the Hunter, and the extent of water communication which exists, this district is one of the finest in the colony. A large number of respectable farms skirt the banks of the river and the country

* Wentworth's *Statistical Account of N. S. Wales*.

wears an aspect resembling the rich pastoral scenery of Devonshire. The valley of the Wollombi extends in a northerly direction towards Hunter's River, for about thirty miles. It is bounded on either side by mountain ranges, covered with timber to their summits. Numerous valleys, or, as the settlers call them, *arms*, branch off on either side; some stretching twenty or thirty miles among the mountains, all abounding in excellent pasture, and affording sustenance to numerous flocks of sheep, and herds of cattle that depasture amidst this wild and beautiful scenery.

Port Stephens, situated about 100 miles from Jackson, is a fine harbour; the narrow entrance between rocky headlands, opens into an expanse about two miles in length; then narrowing, forms a channel, which admits vessels of considerable burthen, to a second bay perfectly land-locked. The little river Karuah, which falls into it, affords a means of communication some distance into the interior; it is said to be navigable as far as Booral, which is twenty miles from Port Stephens. The Myall, a still smaller stream, which has its embouche in Port Stephens, opens into some extensive lakes, situate along the coast, separated only by a narrow strip of land from the ocean.

Manning River forms the northern boundary of Gloucester county; it disembogues into the ocean by two mouths, called Farquhar and Harrington inlets, which are divided by a singularly-shaped island, named Mitchell Island: neither of them afford more than a harbour for boats, for which, indeed, the navigation of the Manning is alone adapted. It flows from the eastern side of Liverpool range: its banks have good soil and fine scenery.

Hastings River, after a course of about 100 miles, joins the sea at Port Macquarie, about 220 miles to the north-east of Port Jackson, in $31^{\circ} 25' 45''$ S. lat., $152^{\circ} 53' 54''$ E. long. Port Macquarie is a bar harbour, with at least nine feet low water spring tides. The bar (composed of soft sand) extends for 200 yards; beyond this, the water immediately deepens to two and three fathoms; within the port, the soundings are five and six fathoms, which depth continues for nearly ten miles, when shoals confine the navigation to crafts drawing six or eight feet. That depth continues for eight miles, where the rapids commence. The source of the Hastings has been already mentioned (p. 433), on the authority of count Strzelecki; ac-

cording to Mr. Hodgkinson, it rises (in $31^{\circ} 50'$ S. lat., $151^{\circ} 50'$ E. long.), "at Mount Warragambi, one of the summits on the range which divides the basin of the Manning River from that of the M'Leay. This range branches out at Mount Warragambi, so as to form the basin of the Hastings River, which consequently does not rise in the great main chain of mountains dividing the eastern and western waters, as some authors have averred." Mr. Hodgkinson, in the interesting work from which the above observation is taken—*Australia, from Port Macquarie to Moreton Bay*—notices an error with regard to the Hastings river, made by me in a previous work, for which I cannot, at this lapse of time, at all account. He makes due and kindly allowance for errors "almost unavoidable in writing a work of such magnitude as Mr. Montgomery Martin's *History of all the British Colonies*;" but he is, perhaps, scarcely aware of the difficulty which existed at the period at which it was written (1834–5), of obtaining accurate and sufficient data concerning many of our vast possessions, and especially Australia.

The country bordering on the Hastings undulates pleasingly in hills and dales lightly clothed with good timber; to the north-east the river opens into reaches of great width and beauty. The Maria river, which empties itself into the Hastings at John's Plains, is navigable, according to Dr. Lang, for "forty miles from its mouth;" but he must mean only for small craft. The Wilson river, another tributary of the Hastings, is navigable for about twenty miles; the alluvial soil on its banks is of excellent quality, as evinced in the produce of a series of farms extending for twelve or fifteen miles in a continuous chain. A few miles to the south-east of Port Macquarie are some extensive lakes, which communicate with the ocean.

The MacLeay River falls into the sea at Trial Bay, in $34^{\circ} 40'$ S. lat. Trial Bay is a good roadstead, being completely protected from all winds but those between north and east, from which quarters the winds are seldom strong. The entrance to the river is obstructed by a bar having about eleven feet of water on it; it is described by captain King as being navigable for vessels of 300 tons to fifty-seven miles above its mouth: but Mr. Hodgkinson, when recently surveying it, found it only navigable for thirty-four miles, and so far only for vessels not exceeding sixty or seventy tons burden. The Apsley joins the MacLeay from the south-

west; above this junction the scenery is described* as assuming a grand alpine character, both rivers hurrying along rapidly descending beds, through narrow glens of frowning precipices, 3,000 feet in height, whilst the surrounding mountains frequently attain an elevation of 6,000 feet above the level of the sea. Tremendous cataracts are of continual occurrence; at one of them the whole river has a perpendicular fall of 250 feet, and after raging in a furious torrent, half foam and vapour, along a steep inclined plane, it again dashes down another perpendicular fall of 100 feet; the total descent of its waters in this short distance being probably little under 500 feet. After tracing the MacLeay upwards, through this rugged country, its bed rising rapidly to a very considerable elevation above the sea, we at length emerge on a gently rising table land. From this point to its sources, the MacLeay river changes its character, and assumes similar features to the New England streams, flowing west to join the Peel river, smaller trees sparingly scattered over pasturage of quite different aspect to that bordering the lower MacLeay, being here observable.

The Nambucca River, whose mouth is about eleven miles to the north of the MacLeay, has its entrance obstructed by a rocky impassable bar; it is formed by several mountain streams rising in bushy gullies, and its banks consist of mangroves, tea-tree swamps, dense forest and cedar brushes. "The nettle-tree," (says Mr. Hodgkinson,) "attains a very large size at the MacLeay and Nambucca rivers, being often six feet in diameter, and of a corresponding height; its wood is very soft and spongy, and its leaves, which are of great size, resemble in shape those of the mulberry, and, at the same time, possess the bright green velvet appearance of the geranium leaf. The slightest touch of one of these leaves occasions a most acute stinging pain; but horses suffer infinitely worse than men, from contact with the leaves of the nettle-tree, as their skin rises in large blisters, and great temporary constitutional derangement seems to take place."

The Coohalli, a small stream which filters through a sandbank to the sea, about six miles north of the embouchure of the Nambucca, is deserving of mention, from its being noted by Mr. Hodgkinson as the furthest point south, and, consequently, the

nearest point to Sydney, at which he found the magnificent variety of pine generally known as the "Moreton Bay pine." "These trees," he says, "occur here all of a sudden, in considerable numbers, and of great size and altitude, although I have not detected one single individual pine in any of the brushes of the Nambucca, MacLeay, Hastings, or Manning rivers, or, indeed, anywhere south of this point."

Bellengen River was discovered by a party of sawyers, in 1841. It is a fresh-water stream, about the size of the Hastings; but, notwithstanding the luxuriant vegetation on its banks, is rendered unavailable for grazing purposes by the precipitous heights which hem in and contract its bed. The sawyers, however, must have considered their discovery a very fortunate one, for Mr. Hodgkinson, who explored it in 1842, speaks very highly of the quality of the timber growing on its banks, and those of its tributary, the Odalberree, the trunks of the cedar and rosewood trees being often six feet in diameter and ninety feet high, before they throw out a single branch.

Clarence River disembogues in Shoal Bay, in 29° 30', where its entrance is obstructed by a bar having about eleven feet of water on it. The Clarence is remarkable for its great breadth and large volume of water (compared with other rivers of Australia), and considering the shortness of its course. Its reaches are said to be longer and wider than those of any stream on the coast of Australia, and navigable for large steamers to a considerable distance up the river; the Clarence being navigable, for some craft, for nearly ninety miles. A few miles above its mouth is an island, containing an area of above 1,500 acres, and many smaller ones occur higher up the river. The country on its banks available for grazing purposes being of considerable extent and excellent quality, a great number of squatters have formed stations upon it. The Clarence rises in the dividing range, and receives several large tributaries, one of which, the Ora-Ora, rises in the lofty mountains which divide the basin of the Clarence from the Bellegen.

Richmond River (still tracing the coast in a northerly direction,) falls into the sea near Lennox Head, in 28° 55' S. lat. The bar at its mouth has from eight to ten feet of water upon it, above which the river is navigable for small craft for about thirty miles. Its sources are not yet ascertained,

* Hodgkinson's *Australia from Port Macquarie to Moreton Bay*.

but its main stream appears to rise in the dividing range, near Wilson's Peak and Coke's Head. There is much good available land on its banks, and some fine cedar.

Tweed River, or, rather, *creek*, for it is but a large salt-water inlet, yet its extensive reaches are navigable for large boats to a distance of upwards of forty miles from its bar, which has been crossed by a schooner of sixty tons burden.

Brisbane River.—Proceeding along the coast, we arrive at Moreton Bay, which is sheltered by two narrow islands of from fifteen to twenty miles in length, called Moreton, and Stradbroke Island. The bay is said to be sixty miles in extent; it receives several streams, the most important of which are the Logan, the Brisbane, and the Pumicestone river. The Brisbane disembogues in $27^{\circ} 1' \text{ S. lat.}, 153^{\circ} 26' \text{ E. long.}$ The bar at its mouth has eighteen feet of water on it. This river was discovered, in 1823, by captain Oxley, who, in his official despatch, makes the following remarks concerning it:—

"When examining Moreton Bay, we had the satisfaction to find the tide sweeping up a considerable inlet, between the first mangrove island and the main land. The muddiness and taste of the water, together with the abundance of fresh-water molluscs, assured us we were entering a large river; and a few hours ended our anxiety on this point by the water becoming perfectly fresh, while no diminution had taken place in the size of the river after passing what I called Sea Reach. At sunset we had proceeded about twenty miles up the river. The scenery was peculiarly beautiful; the country along the banks alternately hilly and level, but not flooded; the soil of the finest description of brushwood land, on which grew timber of great magnitude, and of various species, some of which were quite unknown to us. Among others, a magnificent species of pine was in great abundance. The timber on the hills was also good; and to the south-east, a little distance from the river, were several large brushes or forests of the *cupressus Australis*, of very large size. Up to this point the river was navigable for vessels not drawing more than sixteen feet water. The tide rose about five feet, being the same as at the entrance. We proceeded about thirty miles further, no diminution having taken place either in the breadth or depth of the river, excepting in one place for the extent of thirty yards, where a ridge of detached rocks extended across the river, not having more than twelve feet upon them at high water. From this point to Termination Hill the river continued of nearly uniform size. The tide ascends daily fifty miles from the mouth of the Brisbane, flowing also up the Bremer, the depth of whose channel it augments by eight or more feet. The country on either side is of very superior description, and equally well adapted for cultivation or grazing, the timber being abundant, and fit for all the purposes of domestic use or exportation. The pine trees, should they prove of good quality, are of a scantling sufficient for

the largest ships: some measured upwards of thirty inches in diameter, and from fifty to eighty feet without a branch."

Subsequent examination has verified, to the fullest degree, this favourable account; and the capabilities of the valuable and beautiful tract of country, traversed by the Brisbane and its tributaries, even surpass his expectations in their capacity of supporting a numerous population, and of producing, in abundance, the tropical products of sugar, cotton, coffee, silk, tobacco, &c. In a subsequent part of his despatch, captain Oxley thus expresses himself concerning the source of the new-found stream:—"A consideration of all the circumstances connected with the appearance of the river, justifies me in entertaining a strong belief that the sources of this river will not be found in a mountainous country. Most probably it issues from some large collection of interior waters, the reservoir of those streams crossed by me during an expedition of discovery in 1818," (see p. 383), "and which had a northerly course. Whatever may be its origin, it is by far the largest fresh-water river on the east coast of New South Wales." Captain Oxley's surmise concerning the sources of the Brisbane, and the length of its course, have been disproved by more recent surveys, the Brisbane having been ascertained to take its rise in the dividing range, opposite to and in a straight line only sixty miles from Moreton Bay. The width of its basin, its tortuous course, and numerous tributaries, however, soon render it an important stream. It is joined on the south side by the Bremer river rising near Mount Frazer, on whose banks coal and limestone are found in large quantities.

Wide Bay is a good port, having in its entrance a channel of not less than three fathoms deep: it communicates with Hervey Bay, thus completing the insulation of Great Sandy, or Frazer's Island, whose north-eastern extremity was named by captain Cook, Sandy Cape. Mr. R. S. Russell, who visited the bay in 1842, thus describes it:—"Frazer's Island, which forms Wide Bay, or, more properly speaking, '*Sound*,' for it is twenty-five miles long, runs nearly parallel to the main, trending more easterly towards the northern extremity, thereby leaving a wide open entrance. At the southern extremity the island is not more than three-quarters of a mile from the main. A spit of sand comes out both from the island and from the main; but by not attempting to

run in until the round mountain, called Boppol, is well open between the two shores, the channel is clear and good with at least six fathoms water." Mr. Russell, in his account of this excursion, subsequently states that he found in the southerly part of the bay, to which his exploration was confined, innumerable shoals and islets; one large navigable river, called by the natives Monobocola, without a bar, but having at its mouth sand-banks dry at low water, which leave only a narrow channel between them. The tide flows about thirty miles up, and the river is navigable for that distance for vessels drawing eight feet; after losing the tide it soon becomes small, but can be ascended by boats for about twenty miles further. The banks are low, but generally well timbered with large trees, and ducks and black swans abound. To the country near the head of the boat navigation of this stream the natives resort in large numbers, to feed on the fruit of the Bunya-Bunya tree, a species of pine, growing, according to Mr. Russell, as straight as an arrow to the height of from 100 to 300 feet. It bears a large cone full of nuts, which are excellent when roasted, but taste, when raw, like the horse-chestnut.*

Hervey Bay is fifty miles wide, at its mouth, and extends inland, in a southerly direction, for about the same distance.

Bustard Bay, in $24^{\circ} 4' \text{ S. lat.}$ and $208^{\circ} 18' \text{ E. long.}$, was so named by captain Cook, in honour of a bird of the bustard species, about the size of a turkey, caught here, which he speaks of as the best bird he had eaten since he left England.

Boyne River, or rather, the upper portion of that stream, was discovered by Mr. R. S. Russell, in his second exploring expedition of 1842, but only partially explored. The

bed of the river, near its source, lies in a valley of the dividing range, apparently elevated about 1,500 feet above the level of the sea, receiving small tributaries from the higher country, both east and west. The bed here was sandy, with much of the tea-tree growing in and about it; high reeds grew also along the edges of the reaches which, thirty or forty miles farther (tracing the river from its source), increase greatly in length, while many streams, both from the east and west, empty themselves into the main channel, the land becoming more mountainous, and the valleys more fertile; a considerable tributary, called the Stuart, flows in from the eastward. The Boyne, though after the confluence of the Stuart it contains a volume of water very unusual in Australian streams, cannot, it is feared, be used for internal communication, as it flows, in many parts, rapidly over rocky beds. The river was traced by its discoverers for about 300 miles, or to about $24^{\circ} 15' \text{ S. lat.}$; when they turned back, it was flowing considerably to the eastward of north, and they were, apparently, not far from the sea.

Port Curtis, into which a river called the Boyne, and considered by Mr. Russell identical with that above described, disembogues, is in $23^{\circ} 51' 45'' \text{ S. lat.}$, and $151^{\circ} 24' \text{ E. long.}$ (ten degrees east of Sydney); it is reported to be an excellent harbour, which, through the passage of entrance recently discovered by captain Stanley, is of very easy access for shipping of any burthen. The coast line from this point has been described in a previous section; we therefore return to Broken Bay, premising, however, that the rivers of New South Wales, south of Sydney, are generally inferior to

* Among a native tribe on this river, Mr. Russell found a white man, a convict named Davis, who had absconded from the penal settlement fourteen years before, and had never since been heard of. He had been transported when only eleven years of age, and had run away two years after; he appeared at first to have almost entirely forgotten his own language, but soon recovering his knowledge of it, he was persuaded to return to Moreton Bay. The natives shewed great sorrow at parting from him, and followed him a long way down the banks of the river with loud lamentations. The statement made by Davis concerning the aborigines was to the following effect:—That they supposed all their own men who had died or been killed in battle to become white men, because, before eating them (for they are cannibals) they draw the skin off, and wash the flesh before cutting it up. When flayed in this way the flesh of a black man is perfectly white. They believe he becomes a white ghost in another country beyond the sea. Accord-

ingly, when they first heard of whites, they supposed them to be the ghosts of their own dead come back; and if any one traced a fancied resemblance in a white man to a deceased relation or friend, he took him under his protection, in the full persuasion that it was his son, brother, or whoever it might be, returned to him. In such a case a white man has nothing to fear from the tribe to which his patron belongs. They will kill a fat white man sometimes, to eat, if he is not owned by any of the tribe as some ghost of a returned relation, but they will not skin him as they suppose him to have been already skinned when eaten as a black. In cutting a man up they open his back, and having extracted the bones from the legs and arms, these are eaten by the men as being the tit bits. They then cut the head open and pick it; the viscera and heart are given to their gins (wives), whom they use worse than dogs.—See *Journal of Royal Geographical Society*, vol. xv.

those on the north, in both length of course and volume of water; and, therefore, few of them need any especial notice, their names and situations being sufficiently delineated on the map.

Paramatta River is little more than an extension of Port Jackson, but very useful as affording the means of water communication between Sydney and Paramatta, being navigable for that distance (eighteen miles) by second-class steam-boats and small craft. Port Jackson has been already mentioned, and also Botany Bay; the north point of entrance to the latter is formed by Cape Banks, and the south by Cape Solander, in $34^{\circ} 0' 45''$ S. lat., $151^{\circ} 15' 50''$ E. long. A plate fixed in the rock of this latter cape, records the first visit of captain Cook.

George River disembogues in Botany Bay, after collecting chiefly all the waters to the eastward, between the Hawkesbury and the sea. Small vessels ascend the river as far as Liverpool, which, following the windings of the stream, is about twenty-four miles from Botany Bay, though, in a direct line, only half that distance; the water near Liverpool is stated by Mr. Wentworth to be occasionally brackish, during the long summer droughts.

Port Hacking, as far as I am aware, has not been specially surveyed; we gather from Flinders' brief account, that it has three-and-a-half fathoms in the entrance; that it divides into three branches, and carries from three to five fathoms water in the middle one, at the distance of two miles from the sea.

Red Point, further to the southward, in $34^{\circ} 29'$ S. lat., is a remarkable headland situated on the north-east side of the peninsula which incloses Lake Illawarra on the north. It acquired its name from the dull red colour of its cliffs; on it are four hillocks, which present the form of a double side-saddle; it may also be recognised by a strangely shaped hill, about eight miles from it, named Hat hill, by captain Cook. There are two rocky islands off the point, and at a short distance to the northward, another group, called Martin's Isles. Illawarra lake is a large salt-water lake communicating with the sea.

Point Bass is the next marked feature on the coast, to the south of which *Shoalhaven River* falls into the sea, between the counties of Camden and St. Vincent. This stream is navigable for about twenty miles, for vessels of seventy or eighty tons burthen.* Its

* Wentworth's *New South Wales*.

channel is a ravine, about 1,500 feet below the ordinary level of the country between it and the Wollondilly. A singular grandeur is imparted to the scenery of the Shoalhaven, by precipices, consisting, at one part, of limestone of a dark grey colour, and containing very imperfect fragments of shells—and at another, of granite.

Among the peculiar features of these lofty river banks are many remarkable hollows, called "hoppers," by the country people, from the water sinking into them, as grain subsides in the hopper of a mill. The country on the upper part of the Shoalhaven river comprises much good land; the river flows there nearly on a level with the surface, and resembles an English stream; the temperature, at the elevation of about 2,000 feet above the sea, being also so low, in summer, that potatoes and gooseberries, for both of which the climate of Sydney is too hot, grow there luxuriantly.†

About two miles from the mouth of this river is a small port, called by the same name (Shoalhaven), which it well merits, the entrance being choked with sand, and the interior with banks of mud, leaving, however, a sufficient channel for boats.

Jervis Bay extends about three leagues from north to south, and nearly two in breadth. Its east side is sheltered by a peninsula, the bight behind which (named Crookhaven) is separated from the bay by an isthmus of not more than 400 yards wide. The north point of the entrance to Hervey Bay, called Point Perpendicular, is (according to lieutenant Jeffreys) in $35^{\circ} 6' 28''$ S. lat.; the south point is formed by a small low island lying contiguous to Cape George, between which there is a passage, though a very bad one. The entrance is about a mile-and-a-half, or two miles wide, with a depth of fifteen to twenty fathoms, and, within, the soundings are regular, from fourteen to ten fathoms, decreasing to eight and seven fathoms near the shore on either side. There is sufficient room for ships of any size to work in or out; but there are dangers difficult to guard against. A sunken rock lies about one and one-third mile within the north point of the entrance, and a mile distant from the shore; and (judging from the plan of Mr. Weatherall, published by the Hydrographical Office, Admiralty,) reefs seem to extend from almost all the points in the bay. The best and most con-

† Mitchell's *Expeditions into Australia*.

venient anchorage is from six to ten fathoms, under Bowen's Island.

Cape George, in $35^{\circ} 10'$ S. lat., lies to the southward of Jervis Bay; the next inlet is Sussex Haven, by which a lake with broken shores, called St. George's Basin, communicates with the sea. Still proceeding south, the next land-marks are the Pigeon-house, a peaked hill so called by captain Cook, from its resembling a square dove-house with a dome at the top, in $35^{\circ} 20' 30''$ S. lat., and the perpendicular cliffs of Point Upright, in $30^{\circ} 35'$ S. lat.

Clyde River, which is described as a fine, clear, and capacious river, with nine feet water on the bar, and deepening within to six fathoms, empties itself into *Bateman's Bay*. Lieutenant Johnson carried a depth of seven to four fathoms upwards of twenty miles within the bay. The bay is about six miles wide, and contains several little islands, behind which small vessels frequently take anchor.

Moruya River falls into the sea at *Moruya* or *Broulé Bay*, to the south-east of which is Cape Dromedary, a projecting headland, with a double mountain over it of considerable elevation, which, it is said, may be seen at the distance of twenty leagues. The Cape is in $36^{\circ} 18'$ S. lat., and about six miles to the eastward of it lies Montague Island, of nearly two miles in length from north to south, with a depth of twelve fathoms near its west side, where ships may anchor, but on a rocky bottom. There are some rocks near the south-west end of the island. All the coast between this promontory and Cape Howe may be safely approached, to a reasonable distance, as soundings extend to the distance of three or four leagues.

Barmouth Harbour is thus mentioned by captain Flinders:—"A strong wind, which burst from the south, obliged Mr. Bass (in a whale boat), to run for a gap in the land, which had just before been noticed. Here, on a little beach, at the mouth of an inlet, across which the sea was breaking, the boat was hauled up for the night. Next morning, the inlet being free from breakers, he entered the prettiest little model of a harbour he had ever seen. Unfortunately, it is but a model; for although the shelter within be complete for small craft, yet the depth over the bar is too small even for boats, except at high water, when there is eight or nine feet." The intermediate land between Barmouth Harbour and Twofold Bay, a

distance of about seven leagues, is of moderate elevation, bending a little to the eastward, with three islands contiguous to it.

"*Twofold Bay*," says captain Flinders, "is not of itself worthy of any particular interest, but as nothing larger than boats can find shelter in any other part of this coast, from Corner Inlet, or from Furnaux's Isles to Jervis Bay, it thereby becomes important to whalers and other ships passing along this coast." The shores of the bay are of moderate elevation, and consist of steep heads, rocky points, and sandy beaches. Snug Cove is situated in the north-west angle of the bay in $37^{\circ} 4'$ S. lat., $150^{\circ} 3'$ E. long. "Wood, in abundance," says Flinders, "can be procured on every side of the bay; but there are only two places where fresh water was found, and that not very good. One of these was a swampy pond upon the low neck near Snug Cove, where casks might be filled without much difficulty; the other is near the inferior anchorage on the south side of the bay." To the south-west of Twofold Bay lies *Green Cape*, which is smooth and sloping, with a deep bight or bay to the southward; the coast from thence to Cape Howe is bold and mostly rocky.

Cape Howe, the south-east point of Australia, and the southern limit of the coastline of New South Wales, is a low point of rocks and sand, with a small island close to it. It may be easily recognized by the trending of the coast, which is nearly west on one side and north on the other, and also by some round hills in the vicinity.

The westerly or inland rivers of New South Wales, occupied a considerable portion of the section on internal exploration. We have already seen that after the successful enterprise of Messrs. Blaxland, Wentworth, and Lawson had found a pass over the Blue Mountains, several streams were discovered flowing in a westerly direction, of which two of the most considerable, the Lachlan and Macquarie, were traced in their different courses, by captain Oxley, to their apparent termination in reedy and impassable morasses (page 382,) in which, however, they are not finally lost, it having been subsequently ascertained that the waters of the marshes in which the Lachlan is for a time lost, reunite in one channel and flow into the Murrumbidgee, while those of the Macquarie are drained in a similar manner into the Darling. *Lachlan River* has its origin in the mountains bordering Argyle county, one of its most easterly sources being Derin-

gullen ponds, which arise in the southern of the three open flats of grassy land called Bredalbane Plains; thence it runs in a north-westerly direction, receiving in $33^{\circ} 5' 20''$ S. lat., $147^{\circ} 13' 10''$ E. long., a tributary from the north-east, called Goobang Creek, which has its sources in the ravines between Harvey's and Croker's ranges.* The Lachlan, after the junction of the Goobang, changes its direction from north-west to south-west, and a creek called by the natives "Cudjallagong" leaves the river and conveys its waters almost straight back from their course to supply Regent's Lake, which, when discovered by Oxley, in 1817, was described by him as a "noble lake;" but when visited by Mitchell, in 1836, appeared for the most part a plain covered with luxuriant grass, with some water lodged on the most eastern part, but in no place more than a foot deep. Innumerable ducks had taken refuge there, and also a great number of black swans and pelicans, all standing high upon their legs, above the shallow water. Unlike the water of Lake George, which is brackish, that of Regent's Lake was perfectly sweet even in its shallow state. It abounds with large fresh-water mussel; on its northern margin, and a good way within the line of the water, stood dead trees of a full-grown size, apparently killed by too much water, too plainly shewing, like the trees similarly situated in Lake George and Lake Bathurst, to what long periods the extremes of drought and moisture may extend in this singular country. That the lake is sometimes a splendid sheet of water was obvious enough in the line of beach along the shores. At two different places the banks are so low that in high floods the water must flow over from the lake, and probably thus supplies Campbell's Lake, and another to the northward of Regent's Lake, named "Goorongully." Following the course of the Lachlan from Cudjallagong creek, we arrive at the farthest spot to which Oxley traced it, (according to Mitchell in $33^{\circ} 41' 10''$ S. lat., $145^{\circ} 9'$ E. long.;) but instead of terminating there, its banks at fifty miles below this spot are backed on both sides by rising ground until it turns finally southward towards the Murrumbidgee, which it joins in $34^{\circ} 25'$ S. lat., and $144^{\circ} 3'$ E. long. Sir Thomas Mitchell makes the following observations on the oc-

casion of his exploring this river in 1836:—"I beheld in the Lachlan all the features of the Darling, but on a somewhat smaller scale. The same sort of large gum trees, steep, soft, muddy banks; a margin and an outer bank. But its waters were gone, with the exception of a few small ponds, which still remained in the deepest parts of its bed. Such was now the state of that river down which my predecessor's boats had floated. I had, during the last winter, drawn my whale-boats 1,600 miles over land, without finding a river where I could use them; whereas Mr. Oxley had twice retired by nearly the same routes, and in the same season of the year, from supposed inland seas!" The Lachlan, therefore, although occasionally in flood, cannot be depended upon as a navigable river.

Murrumbidgee River rises in the western ridge of mountains situated to the southward of the parallel of 35° , and under the meridian of 149° , at a distance of about eighty miles from the sea, and after receiving Yass river, the Coodrabbidgee, the Tumut, or Doomot, and some other minor streams, which fall into it at an early stage of its progress, pursues a long and tortuous course for upwards of 300 statute miles, without deriving the slightest increase from the country it waters. As its course extends to the westward of the meridian 147° , the river falls on a low level; the hills of sandstone rock, which give a picturesque appearance to the lands on its banks, higher up the stream, disappear, and flats of alluvial deposit occupy their place. From the account of Sturt in 1829-30, and of Mitchell in 1836, we gather that the Murrumbidgee is, to a certain extent, for a very considerable distance, a navigable river. The former authority, speaking of it at the end of the year 1829, describes it, not far from the junction of the Tumut, as "a stream whose current it would have been difficult to breast, and whose waters, foaming among rocks or circling in eddies, gave early promise of a reckless course. It must have been somewhat below its ordinary level, and averaged a breadth of about eighty feet." Lower down it "expanded into a fretful rapid, but it was sufficiently shallow to admit of taking the drays over, without the trouble of unloading them." Still lower, it increased in

* It is rather remarkable that captain Oxley, when exploring the Lachlan, should have omitted to survey that portion of it where it is joined by the Goobang; especially as, according to Sir F. L. Mitchell, it is

the floods of this stream which inundate the country below Mount Cunningham, and were the sole cause of the swampy appearance which captain Oxley observed to the westward

size, but preserved the characteristics of a mountain stream, having alternate rapids and deep pools, being in many places encumbered with fallen timber, and generally running over a shingly bed. "Below Pontebadgery it expands. Further on, it had been swollen considerably by rains, and rolled along at the rate of three miles an hour, preserving a medium width of 150 feet." Captain Sturt subsequently says—"During the night it fell considerably, but it still poured along a vast body of water, possessing a strong current. It kept a very uniform breadth of from 150 to 170 feet, and a depth of from four to twenty feet. Its channel, though occasionally much encumbered with fallen timber, was large enough to contain twice the volume of water then in it." The current was so strong, as to carry the "swimmers" out of their straight course. In January, 1830, captain Sturt embarked in his boats, about fifteen miles above the junction with the Lachlan. He proceeded from twenty-eight to thirty miles by the river's windings, but a little beyond this, one of the boats struck on a log, and went down in twelve feet water. Larger boats could have navigated the stream, which was deep and strong. The channel, however, contracted lower down, and became filled with immense trees, swept there by floods. The whale-boat again struck on a log; and, not long after, upon a line of sunken rocks of ironstone. In longitude 143° , a running stream, the first for 340 miles, joined the river, which, shortly after, had a breadth of 200 feet, with an average depth of from twelve to twenty feet; but several rapids occurred, down which the boats were hurried with great velocity. The channel, after this, contracted, and became blocked up with large trees, which, with an increasing current, rendered the navigation perplexing and dangerous. The trees were so numerous, that the passage could hardly be effected. The voyagers were carried, at a fearful rate, amongst these trees by a tortuous current, till they were hurried into a broad and noble river—this was the Murray. The breadth of the Murrumbidgee, at the junction of the two streams, is only fifty feet.

Sir Thomas Mitchell describes the Murrumbidgee as "an important river," and speaks of its full stream, its water-worn and lightly timbered banks, and the firm and accessible nature of its gullies, as quite the reverse of the interior rivers in general, especially the Darling; and states that above

its junction with the Murray, at Weyeba (in $34^{\circ}21'34''$ S. lat., $143^{\circ}56'27''$ E. long.,) it was fifty yards wide, with banks eleven feet high; while the noble Murray (whose description forms a portion of the topography of South Australia, its embouche being in that province) below the junction was a magnificent stream 165 feet broad, with banks twenty-five feet high. The *Sydney Herald*, in an able article, entitled, "Are the interior waters of Australia navigable?" has the following remarks concerning the two rivers we have just examined:—"The Lachlan is clearly not navigable; the Murrumbidgee, nearly up to the mountains, is; but there are considerable dangers from snags, and occasional rapids and shoals. But, perhaps, vessels purposely constructed of small draught, and carefully manned, might be employed, except in seasons of extreme drought. And if so, this river alone, offers full 400 miles of tortuous navigation, extending through at least 300 miles of direct distance." Much of the land traversed by the Murrumbidgee is of excellent quality, and adapted for the support of civilized man; its spontaneous productions long formed the chief food of its native inhabitants, and notwithstanding the great floods to which this river is subject, and the serious injury thereby inflicted on the commencing townships laid out on its banks, the locality is a favourite one, and is being rapidly occupied, especially by squatters.

Darling River, whose basin receives so large a portion of the western waters of New South Wales, is unfortunately not navigable for commercial purposes. Its tributaries, the Karoola or Dumaresq, the Nammoy, and Gwydir or Kindur, are beautiful mountain streams which rise in the hilly country behind Moreton Bay, in 27° S. lat., 152° E. long. Above the junction of the Gwydir, which is in $29^{\circ}30'27''$ S. lat., $148^{\circ}13'20''$ E. long., the Darling is a noble piece of water, and is thus mentioned by Sir T. L. Mitchell, in February, 1832:—"I now overlooked, from a bank seventy feet high, a river as wide as the Thames at Putney, on which the goodly waters, perfectly free from fallen timber, danced in full liberty; a singular-looking diving bird, carrying only its head above water, gave a novel appearance to this copious reservoir, and there was a rich alluvial flat on the opposite bank." This breadth and magnitude did not however continue; a rocky dyke traversed the river, and occasioned a slight fall, after which the Darling lost the imposing appear-

ance it had worn for a brief period, and though soon joined by the meandering Gwydir, did not resume it. The steep banks of this latter stream are lined by eucalypti (blue gum trees) of enormous size, in whose thick foliage white cockatoos abound; many dead trees encumber the channel. The average breadth of the water (in 1832) was forty-five yards; the breadth from bank to bank, seventy-five yards; the perpendicular height of these banks above the water, twenty-seven feet.

The *Namboy* joins the Darling below the junction of the Gwydir. In its channel all the waters of the Peel, Mulnerindie, and Conadilly unite. "This stream," says Sir Thomas Mitchell, "having received the Conadilly from the left bank, had here an important appearance; the breadth of the water was 100 feet, its mean depth nearly eleven feet nine inches, and the height of the banks above the water, thirty-seven feet." The course of the Mulnerindie, from the junction of the Peel to that of the Conadilly, is somewhat to the southward of west. Below the junction of the Conadilly, the well-known native name is the *Namboy*, which pursues a south-west course. The *Castlereagh*, known to the natives as the *Barron*, joins the Darling about fifty miles beyond the junction of the *Namboy*; and below this, on the same side, the attenuated channel of the *Macquarie*, which was found in 1846 (a season of extreme drought) to be continuous in muddy ponds throughout the marshes, unites with that of the Darling (see p. 391).

Macquarie River is formed by the junction of the *Fish* and *Campbell rivers*, which issue from the Blue Mountains, and unite at the point of division between the counties of Bathurst, Westmoreland, and Roxburgh. The *Macquarie* takes a winding course through the plains to the north-west; in some places it is deep, broad, and navigable for large boats; in others rapid and obstructed by falls. In about 32° 30' S. lat. it is still from twenty to sixty yards wide, and twenty feet deep, with a current of about a mile and-a-half an hour. The low land in which this river was lost by Oxley, has been already described (pp. 382—391). According to Mitchell, the surplus waters of the *Macquarie* are conveyed to the Darling by Duck Creek, a channel altogether to the westward of these marshes. The *River Bell* or *Molong* is one of the tributaries of the *Macquarie*, near Wellington Valley, about 170 miles west of Newcastle; another, named

the *Cudgugeeng*, is distant about fifty miles from Bathurst. Below the junction of the *Macquarie* with the Darling, and on its opposite bank, the *Culgoda* joins the latter river. The *Culgoda* is a branch of the *Balonne* (p. 392), and is chiefly characterized by the luxuriant grass on its banks, the mimosa near the bed of the current, and much sand. The *Balonne*, with which we are newly and imperfectly acquainted, is divided by the *Culgoda* into Upper and Lower. According to Sir Thomas Mitchell, the Upper *Balonne*, with majestic trees, and banks grassed to the water's edge, has some noble reaches, one of which, in 28° 18' 34" S. lat., contains a large body of permanent water. Several spacious lagoons are supplied by floods in the *Balonne*. One of these, named by Mitchell, *Lake Parachute*, is described by him as an "immense sheet of water, with islands in it; and ducks, pelicans, &c. in abundance." In 27° 56' 12" S. lat., little water was found in the bed of the river, but long islands of sand, and water-worn banks, with sloping grassy berms behind; for the next few miles, in a north-westerly direction, the scenery was wild and grand; masses of rock, lofty trees, shining sands, and patches of water, indiscriminately mingled, afforded evidence of the powerful current that sometimes moved there and overwhelmed all. The *Condamine* is one of the principal heads of the *Balonne*. Mitchell, in relating his expedition of 1846, says, "I did not ascertain satisfactorily the point of junction of the *Condamine* with the *Balonne*, as what I saw in 148° 55' E. long., 27° 47' 57" S. lat., might have been only an ana-branch. The chief source of the *Condamine* is a stream which rises in the dividing range, about ten miles south of Cunningham Gap; after an irregular course, during which (we learn from the Hon. W. Wrottesley) it is joined by several tributaries—the principal one from Herries' Range—it empties itself into a lagoon having no apparent outlet, and which lies in a direct distance of about sixty miles from its head. He states that "as far as he knows the river, it is a chain of ponds and reaches, through which there is a perceptible current; the ponds are separated from each other by necks of land ranging from a few yards to miles in length, and beneath which the water forces its way. The reaches are generally deep, with high reeds fringing the edges of their banks. The waters of the *Condamine* are clear and pure to the taste; but more to the south-

ward the western rivers are often brackish. In 1841, the Messrs. Russell set out on an exploratory expedition, determined if possible to trace the reappearance of the Condamine, after losing itself in the lagoon, being persuaded that as the latter had no visible outlet for the waters it received, they must escape by some subterraneous channel, and might somewhere be found to reappear upon the surface; having therefore followed the lagoon, which is seven miles in length, to its furthest extremity, they shaped their course from thence in a direction, as nearly as they could judge, the same as the river had held before it fell into the lagoon. At the end of one day's journey they came upon a small gully, which widened untill it broke into a deep, rocky river-bed, on both banks of which was a fine, open grazing country; that on the west side being undulating though not hilly, that on the east, flat and rich. "This river," says Mr. Russell, "is a very fine one for this country, its direction is first north-west and then more northerly, of course not running except in floods, but having beautiful long reaches, with deep water, and fine large lagoons branching out of it. There is plenty of the best kind of timber; iron-bark, blood-wood, pine, swamp-oak, and stringy-bark." The Narran, a branch of the Minor Balonne, (see pp. 391, 392,) terminates in a swamp. The banks of the Narran are distinguished by a belt of the *polygonum junceum*, about 400 or 500 yards wide, growing between the immediate margin and the grassy plains. Here, as on the banks of the Darling, heaps of the red-stalked coral-like plant are found. The seed therefrom is black and small, resembling fine gunpowder when shaken out, but sweet and pleasant to the taste, possessing a nutty flavour; it is collected by the natives, and made into a paste. Sir T. L. Mitchell, speaking of this river, says—

"The Narran seems a wonderful provision of nature for the supply and retention of water in a dry and parched country. The division of the main river into others already mentioned is no less so—irrigating thus from one principal channel, extensive regions of rich earth beyond the Darling, while the surplus, or overflow, instead of passing, as in common cases to the sea, is received in the deep channel of the Narran, and thereby conducted to that extensive reservoir where, on rock or stiff clay, and under ever-verdant *polygonum*, it furnishes an inexhaustible supply for the support of animal life."

This tendency to form ana-branches (i.e. such as after separation unite) and a network of streams, so strikingly pointed out by Sir Thomas in the present instance, and in

that of the Macquarie and the Balonne, is to a greater or less extent remarkable in the majority of the rivers of New South Wales, whose courses it is consequently very difficult to understand without constant reference to the map, so closely connected are they with one another.

Maranoa River joins the Upper Balonne; but of this stream, as also of the *Cogoon*, *Amby*, *Belyando*, and others discovered by the indefatigable Sir Thomas Mitchell, in 1846, and of the *Dawson*, *Mackenzie*, *Suttor*, *Burdekin*, *Lynd*, and others, discovered about the same time by his distinguished contemporary, Dr. Leichardt, mention has already been made in the section on internal exploration. We are so imperfectly acquainted with their courses, that it is not possible to give a clear description of them; and for general observations or fragmentary detail but little space can now be spared. From Mitchell we learn that the bed and banks of the Maranoa are of uniform extent throughout; averaging in width about 100 feet; in height of banks, from thirty to fifty feet. The course was straight; and it seemed as if a few dams might have sufficed to render it navigable, or at least to have retained a vast supply of water; for although the bed was sandy, the bottom was rocky, and the banks consisted of stiff clay. These being covered with rich grass, and consisting of good soil, water alone was wanting to make the whole valuable. The Belyando, according to the same authority, maintains a peculiar character throughout its course, with great uniformity, even after receiving tributaries apparently larger than itself. All these lapse into the same concatenated line of ponds; at one place spreading amidst brigalow scrub, at another forming one well-defined deep channel. For the formation of ponds and the retention of water, in so dry a climate, we see here something between the ordinary character of rivers, and artificial works, which man must construct when population spreads into these regions. The fallen timber of the brigalow decays very slowly, and is not liable to be burnt, like most other dead wood in open forests, because no grass grows among it. The accumulations of dead logs become clogged with river rack and the deposit of floods; to which floods these heaps present obstructions, forcing the waters into new channels, and in their progress scooping out new ponds, and completing the embankment of dead logs; which thus form natural dams

and reservoirs, to hold, under the shade of the brigalow trees, more water for a longer time than any single river-channel could retain, however sluggish its course. Thus it was that, during a season of unusual drought, abundance of water was found in this river's course, across nearly three-and-a-half degrees of latitude. From the above observations, it is evident that the Belyando is a striking example of the general construction of Australian rivers, as noted at the commencement of this section.

To return to the Darling—after receiving the Culgda it is joined by the *Bogan*, on the opposite bank. The chief sources of the Bogan arise in Hervey's range, and also in that much less elevated country situated between the Lachlan and the Macquarie. The lower part of this river was called "Allan's Water," by Oxley; and another portion received the name of "New Year's Creek," from Mr. Hume. Since then it has been surveyed by Mitchell, nearly from its sources to its junction with the Darling; and is considered, by him, as belonging to the basin of the Macquarie, although it never joins that river, but merely skirts the plains which may be supposed to form its original bed. Throughout its whole course of 250 miles, the left bank of the Bogan is close to low hills, while the right adjoins the plains of the Macquarie, until it finally takes a remarkable turn westward towards the Darling. A striking uniformity is manifested in this little river, no change being observable throughout its whole course in the character of its banks, or the breadth of its bed, neither are the ponds near its source less numerous, or of less magnitude, than those near its junction with the principal stream. There are few or no pebbles in its bed, and no reeds grow upon the banks, which are generally sloping and of naked earth, marked with lines of flood. Mr. Dixon estimates the velocity of the current at four miles per hour, where its course is most westerly, (the average rate of the larger rivers of Australia being, according to Mitchell, two miles an hour.) It has often second banks; and, like the Darling, a belt of dwarf eucalypti, box, or rough gum, encloses the more stately flooded gum-trees, with the shining white bark, which grow on the immediate bank of the river. It has extensive plains along the banks, the soil of which is not only much firmer, but also clothed with grass, and fringed with reeds and bushes of a finer variety than those

on the Darling. Yet, in the grasses there is not the wonderful variety remarkable on the banks of that river. "Of twenty-six different kinds," says Sir T. Mitchell, "gathered by me on the Darling, I found only four of the same sorts growing on the Bogan, and not more than four other varieties throughout the whole course. It appeared that where land was best and most abundant, the grass consisted of one or two kinds only; and, on the contrary, that where the surface was nearly bare, the greatest varieties of grasses appeared, as if all struggling for existence." It was hoped that the Bogan would afford the means of access to the Darling at all times, by insuring the traveller on its banks against the chief impediments to travelling in Australia, namely—the want of water in periods of drought, and the results of its superabundance during seasons of rain; for water, it was considered, would always be found in its channel, at least in ponds, while no floods could reach the rising grounds over the left bank of the river. This expectation of the constant supply of water retained in the Bogan has not been realized: for Sir Thomas Mitchell, in December 1845, was compelled to abandon his intended route by this river, from the scarcity of this first necessity of life. About twelve miles below the junction of the Bogan with the Darling, in $145^{\circ} 52' 12''$ E. long., $30^{\circ} 7' 4''$ S. lat., a stockade or block-house was erected by Sir Thomas L. Mitchell, in 1835, on a spot which he named Fort Bourke, and describes as "surpassing anything he had expected to find on the Darling." It consisted of the highest ground rising gradually from the lower levels, by which the river is approached from the Bogan, to an elevated and extensive plateau, overlooking a reach of the river, a mile and-a-half in length, the hill being situated near a sharp turn at the lower end of the reach. At this turn a small water-course enters, which surrounds Fort Bourke on all sides, save that of the river; it encloses about 160 acres, containing abundance of grass. The plateau consists of rich loam; and, when first visited, was thinly wooded. Upon it were found various burying-places of the natives, who always choose the highest parts of that low country for the purpose of interment.* On the 1st June, 1835, the surveyor-general (Sir T. L. Mitchell), embarked in his whale-boats on the Darling at Fort Bourke: and the following extracts

* Mitchell's *Expeditions into Australia*.

from his journal show how little reasonable hope can be entertained of ever rendering the Darling useful as a navigable river:—"We proceeded well enough some way down the river, but at length a shallow reach first occasioned much delay, and afterwards rocks so dammed up the channel, that it was necessary to unload and draw the boats over them. Our progress was thus extremely slow, notwithstanding the activity and exertions of the men, who were constantly in the water, although a bitter cold wind blew all day. By sunset we had got over a bad place, where there was a considerable fall, when, on looking round the point, we found that the bed of the river was full of rocks to the extent of nearly a mile." (Sir Thomas explains elsewhere, that what he here terms rocks is but the ferruginous clay which fills the lowest part of the basin of this river.) "These unexpected impediments to our progress down the river determined me to return to the dépôt with the boats, and afterwards to explore its course on horseback." On June 4th, he tells us, "a rocky dyke crossed the stream in a N.N.W. direction. This must," he adds, "have been another of the many impediments to our boat navigation had we proceeded by water, and from the general appearance of the river, I was satisfied that a passage with boats could not have been attempted in its present state, with any prospect of getting soon down." On June 10th he reached Sturt's furthest, below which the river formed a cataract of about two feet. On 17th June he found deep water; but, on the 19th, the river was so shallow that it seemed almost possible to step across it, and no deep reaches appeared in its bed. This was nearly 120 miles below Fort Bourke. On 24th June, there was a fall of about four feet. On 26th June, he forded the Darling: 200 miles from Fort Bourke the river had the same character as about that locality—a slow current, and an equal volume of water. Below this, on a ride of twenty-three miles, the channel became very contracted, and containing many dead trees, had altogether a diminished appearance. On the 8th July, the country was such as to remind him of the deserts in Asia or Africa. On the 11th July, he says, "I had traced its course upwards of 300 miles, through a country which did not supply a single stream, all the torrents which might descend from the sharp and naked hills being absorbed by the thirsty earth.

Over the whole of this extensive region there grew but little grass, and few trees available for any useful purpose, except varieties of acacia, a tree so peculiar to these desert interior regions, and which there seemed to be nourished only by the dews of night." And respecting this country, he adds, "We saw neither kangaroos nor emus, a sufficient proof of the barrenness of the adjacent country." The furthest point reached was near that now called Laidley's Ponds. Of this whole extent, Sir Thomas says elsewhere—"The average breadth of the river at the surface of the water, when low, is about fifty yards, but oftener less than this, and seldom more. I cannot think that the velocity of the floods in the river ever exceeds one mile per hour, but that it is, in general, much less. At this time the water actually flowing, as seen at one or two shallow places, did not exceed, in quantity, that which would be necessary to turn a mill."

The more recent accounts of captain Sturt accord only too entirely with the unfavourable remarks above quoted. In October, 1844, in his desert expedition (p. 387), he made the Darling about fifteen miles above its junction with the Murray, and found it with scarcely any water in its bed. The river, says captain Sturt, must have been in the state in which we found it for a great length of time, and I am led to infer, from the very grassy nature of its bed, that it seldom contains water to any depth, or length of time, since in such case the grass would be killed. Its flats are backed by lagoons, but they had long been dry, and the trees growing round them were either dead or dying. During a single night the Darling was converted, from an almost dry channel, into a foaming and impetuous stream, sweeping everything away on its turbid waters at the rate of three or four miles an hour, and in four days it overflowed its banks. On the return of the expedition homewards in the following year, some two months later in the season, there had been no recurrence of the flood of the previous year, but the Darling was at a still lower ebb than before, and every lagoon and creek in its vicinity had long been exhausted and waterless. The water is described by Mitchell as being in all parts as transparent as that of the purest spring well, entirely losing all brackish taste below an extreme point of Dunlop's Range, where a hill consisting of a very hard breccia closes on the river so as to separate the plains

above it from those lower down. The taste of the water was found to be worst where the river is nearest to D'Urban's Group—above that, at the junction of the Bogan, and for seventeen miles from thence downwards, it was excellent.

The *Williorara*, or *Laidley's Ponds* was supposed to be a mountain stream flowing in a south-westerly direction into the Darling, which it joins in about $142^{\circ} 26'$ E. long. $32^{\circ} 26'$ S. lat. By it captain Sturt hoped to penetrate the northern interior, but on examination it proved to be merely a channel of communication between two lakes that were on either side of it, called Minandichi and Cawndilla, to which it conveyed the surplus water of the Darling during the floods. It was about fifty yards broad, with low muddy banks, and its course of about nine or ten miles was exceedingly tortuous, but almost due west. Cawndilla lake is merely a shallow basin of considerable extent, filled by the river floods, and retaining them for a short time only. Immense quantities of fish, however, pass into these temporary reservoirs, and the floods are consequently looked for by the natives with anxious expectation. Sir Thomas Mitchell when concluding his account of the Darling, in 1835, makes the following remarks, which illustrate some of the characteristics of this singular river too clearly to be omitted here, although in perusing them the reader must bear in mind that the river was visited by the surveyor-general during a favourable season, and therefore bore a very different aspect to that under which it has been seen by subsequent travellers:—

"From the sparkling transparency of this water, its undiminished current sustained without receiving any tributary throughout a course of 660 miles, and especially from its being salt in some places and fresh at others, it seems probable that the current, when in that reduced state, is chiefly supported by springs. It would appear that the saltiness occurs when the springs also fail, and may be attributed to the same causes, whatever they are, by which all known waters unconnected with springs or streams are said to become salt. The bed of the river is at an average depth of about sixty feet below the common surface of the country. To this depth the soil generally consists of clay, in which calcareous concretions and selenites occur abundantly; at other parts the clay impregnated with iron forms a soft kind of rock in the bed, or banks of the river. There are no traces of water-courses on these level plains, such as might be expected to fall from the hills behind. The hills, nevertheless, contain some hollows and gullies which must, in wet seasons, conduct water to the plains; the distance of such heights from the river being seldom less than twelve miles, and it would appear that the intervening country is of such an absorbent

nature, and so extensive, that any torrents from the higher country are imbibed by the soft earth, for the hollow parts are seared with deep broad cracks, which in wet seasons must take up and retain much water, until it is either evaporated, or sinks to lower levels. The water may thus be absorbed and retained for a considerable time, and escape by slow drainage into the river, especially where the lower parts of such plains are shut in by hills approaching the channel. Thus, where the extremity of Dunlop's range shot forward into the wide level margin, we found that the water had lost all taste of salt, a circumstance most easily accounted for, by supposing that springs being more abundant there, from the near vicinity of the hills, had diluted the water which we had found salt higher up.

"The marks of high floods were apparent on the surface, to a distance frequently of as much as two miles from the ordinary channel. Within such a space the waters appear to overflow, and then to lodge in hollows (covered with *polygonum junceum*), and which were then full of yawning cracks. Such parts of the surface would naturally become first saturated in times of flood, and be the last to part with moisture in seasons of drought. I observed that there was less of that kind of low ground where the water was saltiest, which was to the westward of D'Urban's group.

"The basin of the Darling, which may be considered to extend to the coast ranges on the east, appears to be very limited on the opposite or western side, a desert country from which it did not receive, as far as I could discover, a single tributary of any importance. A succession of low ridges seemed there to mark the extent of its basin, nor did I perceive in the country beyond, any ranges of a more decidedly fluvial character.

"Some of the hollows behind the immediate banks on both sides contained lagoons; in some of these, reeds had at length taken the place of water; in others, the first coating of vegetation which the alluvium receives on exposure to the sun, consisted of fragrant herbs, and amongst them we found the scented trefoil (*trigonella suavissima*), which proved an excellent anti-scorbutic vegetable when boiled. The surface of the earth near the river is unlike any part of the earth's face that I have elsewhere seen. It is as clear of vegetation as a fallow-field, but with greater inequality of surface, and full of holes. The soil is just tenacious enough to open into cracks, for the surface becomes so soft and loose that the few weeds that may have sprung up previous to desiccation seldom remain where they grow, being blown out by the slightest wind. Over such ground it was fatiguing labour to walk, the foot at each step sinking in to the ankle, and care being necessary to avoid holes always ready to receive the whole leg, or sometimes a man's whole body. The labour which this kind of ground cost the poor bullocks, drawing heavy carts, reduced them to such a state of weakness, that six never returned from the Darling." "Of the hills in general it may be observed, that those on the left bank are most elevated at the higher parts of the river, whereas those on the right bank rise into greatest height towards the lower parts of the river, as far as explored by us. The plains extend on each side of the channel to a distance of six or seven miles, and are in general clear of timber. That deep and extensive bed of clay, so uniformly filling the basin of this river, has every appearance of mud deposited. Behind them the

country is sparingly wooded, except by the stunted bush (*myoporum montanum*), which forms a thick scrub, especially on the side of the low hills. On the river bank, trees peculiar to it grow to so large a size, that its course may be easily distinguished at great distances, and thus these facilitated our survey in a very great degree. These gigantic trees consist of that species of eucalyptus called blue gum in the colony. Its searching roots seem to luxuriate in the banks of streams, lakes, or ponds, where it is so constant to moisture, that the thirsty traveller soon learns to recognise its shining trunk and white gnarled arms, as the surest guides to water. The alluvial portion of the margin of the Darling is narrow, and in most places overgrown with the dwarf box, which is another species of eucalyptus. In this alluvial part there are hollow places as already observed, covered with the *polygonum junceum*, which is an unsightly leafless bush or bramble. Grass is only to be found on the banks of the river, for, strictly speaking, the margin only can be considered alluvial, for this being irrigated and enriched by the floods, is everywhere productive of grass, which grows there abundantly, even where none appears in the back country.

"In the back-ground beyond the plains, some casuarine and eucalypti are occasionally seen in the scrubs which grow on the red sand, and an acacia (having a white stem, the bark being much spotted) there grows to a considerable size, and produces much gum. Indeed, gum acacia abounds in these scrubs, and when the country is more accessible, may become an article of commerce.

"The plants, though in general different from those nearer the colony, were few, but curious. Of grasses I gathered seeds of twenty-five different kinds, six of these growing only on the alluvial bank of the Darling. Among these were a *poa*, and the *chloris truncata*, and *stipa setacea* of Mr. Brown. The country was, nevertheless, almost bare, and the roots, stems, and seeds, the products of a former season, were blown about on the soft face of the parched and naked earth, where the last spring seemed indeed to have produced no vegetation, excepting a thin crop of an umbelliferous weed.

"The natives of the Darling live chiefly on the fish of the river, and are expert swimmers and divers. They can swim and turn with great velocity under water, where they can both see and spear the largest fish, sometimes remaining under water for this purpose a considerable time. In very cold weather, however, they float on the surface in pieces of bark; and thus also they can spear the fish, having a small fire beside them in their bark canoe. They also feed on birds, and especially on ducks, which they ensnare with nets, with which a tribe is always provided. These nets are very well made, much resembling our own, and of a similar material, the wild flax, which grows near the river in tufts, and thus very convenient to pull. These are easily gathered by the

gins, who indeed manage the whole process of net-making. They give each tuft (after gathering it) a twist, also biting it a little, and in that state their flax is laid about on the roofs of their huts until dry. Fishing-nets are made of various similar materials, being often very large, and attached to some I have seen half-inch cordage, which might have been mistaken for the production of a rope-walk. But the largest of their nets are those set across the Darling for the purpose of catching the ducks as they fly along the river in considerable flocks. These nets are strong, with wide meshes, and they are hung up on a lofty pole erected for the purpose on one side, usually opposite to some large tree on the other, being easily suspended upon these supports, as occasion requires; such poles are permanently fixed, supported by substantial props, and it was doubtless one of this description that captain Sturt supposed to have been erected to propitiate some deity.

"The native knows well 'the alleys green' through which at twilight the thirsty pigeons and parrots rush towards the water, and there with a smaller net hung up, he sits down and makes a fire ready to roast the birds which may fall into his snare."

The ana-branch, or ancient channel of the Darling, is described by Eyre, who discovered it, as running through the scrub half-way between Lake Victoria and the main stream, with a course of fully sixty miles, nearly parallel to the latter. This singular watercourse forms, in times of flood, another connecting channel between the Darling and the Murray, leaving an immense desert island of low or scrubby lands between it and the Darling. At such times it has a strong current running upwards, caused by the back-waters of the Murray. According to captain Sturt, it has a broad channel and long reaches, but is wholly wanting in pasture, or timber of any size. The plains of the interior formed the banks, and nothing but salsolacæ grew on them. No water, he says, ever flows down the ana-branch into the north.

Victoria River, the *Warrego*, and other streams discovered in 1846, by Sir Thomas Mitchell, and subsequently visited by his able assistant, Mr. Kennedy,* have been already referred to (pp. 393, 394); nor is there, as far as I am aware, sufficient information possessed concerning these streams to furnish a more detailed description.

*When writing of the expedition conducted by this brave but unfortunate gentleman (p. 395), I mentioned that he was supposed to have perished in an encounter with the natives. He was sent to survey the country lying between Rockingham Bay and Cape York, but the stock of provisions being well nigh exhausted, Mr. Kennedy divided his party, and proceeded towards Cape York, in the hope of procuring the supplies which had been forwarded from Sydney by water. Of the nine men left behind, seven perished of ague, produced by over-

fatigue and food both insufficient and unwholesome, for they were compelled to eat the flesh of the wretched horses dried in the sun; and the last survivors (one of whom was Mr. Carron, attached as botanist to the expedition), were too weak to bury their deceased comrades. The fate of those who accompanied Mr. Kennedy was equally melancholy; one of them, named Costigan, accidentally shot himself, and Mr. Kennedy leaving him in the care of two others, pursued his way, in the hope of obtaining speedy succour accompanied only by his faithful

COUNTIES.—New South Wales, according to the "Blue Book" of 1846, contains twenty-two counties, whose area, population, number of acres under cultivation, and produce, will be given in a subsequent chapter. To this number several others have been, or are on the point of being, added. These divisions are so little dwelt upon, and indeed so rarely alluded to, by the writers on the topography of New South Wales (Mitchell alone excepted), that I have found it difficult, after a careful examination of the writings of Oxley, Lang, Braim, and others, of the excellent local journals, and of the colonial and geographical magazines published in England, assisted by the information acquired by personal observation, to furnish anything approaching a clear or detailed description of the counties. Dr. Lang, in his valuable work on New South Wales, remarks, "that, except in government deeds or legal documents, the grand natural divisions of the country are the only ones known

or recognised by the colonists, who accordingly speak only of the districts of the Hawkesbury, of Hunter's River, of Bathurst, of Illawarra, of Argyle, and of Port Macquarie. For the colonial readers, therefore, of the present day, who have not yet arrived at the feeling of countyship (if it may be so termed) manifested in the mother country, a separate delineation of the counties may not be necessary; but the want of it would, I think, be felt by readers in the United Kingdom; and it is to them more especially that I would fain render familiar the state of this and every other British colony, sure that (under Providence) much benefit would thereby result. The following is a brief account of the oldest established counties. The first in point of settlement—

Cumberland county, has a coast line, stretching southward, of about fifty-six miles, and an extreme breadth, from the sea to the base of the Blue Mountains, of forty-six miles.

attendant, an aboriginal named Jackey Jackey, through a country swarming with hostile natives. These savages, according to Jackey's statement, came stealthily behind, and hiding in the scrub, threw large jagged wooden spears at them, by which both they and the horses were wounded. Kennedy fell to rise no more, his last injunction to his weeping follower being, to endeavour to preserve his papers and to convey them to the governor. The poor boy, following the directions of his unhappy master, succeeded in reaching Port Albany, and informing the captain of the schooner lying there with supplies, of the sad results of the expedition. Captain Dobson hastened to Shelburne Bay, but arrived there, as before stated, in time to save two only of the ill-fated band. Jackey Jackey's account of the death of poor Kennedy is so simple and pathetic, that I cannot resist quoting it here:—

"I asked him, 'Mr. Kennedy, are you going to leave me?' and he said, 'Yes my boy, I am going to leave you;' he said, 'I am very bad, Jackey; you take the books, Jackey, to the captain; but not the big ones, the governor will give anything for them.' I then tied up the papers; he then said, 'Jackey, give me paper, and I will write.' I gave him paper and pencil, and he tried to write; and he then fell back and died, and I caught him as he fell back and held him, and I then turned round myself and cried; I was crying a good while, until I got well; that was about an hour, and then I buried him; I dugged up the ground with a tomahawk, and covered him over with logs, then grass, and my shirt and trousers; that night I left him near dark. I would go through the scrub, and the blacks threw spears at me, a good many, and I went back again into the scrub; then I went down the creek which runs into Escape River, and I walked along the water in the creek very easy, with my head only above water, to avoid the blacks and get out of their way; in this way I went half-a-mile; then I got out of the creek and got clear of them, and walked on all night nearly, and slept in the bush without a fire I went on next morning,

and felt very bad, and I spelled for two days; I lived upon nothing but salt-water. Next day I went on and camped one mile away from where I left, and ate one of the pandanos; on next morning I went on two miles, and sat down there, and I wanted to spell a little there, and go on; but when I tried to get up, I could not, but fell down again very tired and cramped, and I spelled here two days; then I went on again one mile, and got nothing to eat but one nondo; and I went on that day and camped, and on again next morning, about half a mile, and sat down where there was good water, and remained all day. On the following morning I went a good way, went round a great swamp and mangroves, and got a good way by sundown. The next morning I went and saw a very large track of black fellows. I went clear of the track and of swamp or sandy ground; then I came to a very large river and a large lagoon; plenty of alligators in the lagoon, about ten miles from Port Albany. I now got into the ridges by sundown, and went up a tree and saw Albany Island. Then next morning at four o'clock, I went on as hard as I could go, all the way down, over fine clear ground, fine iron bark timber and plenty of good grass; I went on round the point (this was towards Cape York, north of Albany Island) and went on and followed a creek down, and went on top of the hill and I saw Cape York; I knew it was Cape York, because the sand did not go on farther; I sat down then a good while; I said to myself, this is Port Albany, I believe inside, somewhere. Mr. Kennedy always told me that the ship was inside, close up to the main land; I went on a little way and saw the ship and boat. I met close up here two black gins and a good many piccaninies; one said to me, 'powad, powad,' then I asked her for eggs—she gave me turtles' eggs, and I gave her a burning-glass; she pointed at the ship, which I had seen before; I was very frightened of seeing the black men all along here, and when I was on the rock, cooeing, and murry murry (very, very) glad when the boat came to me."

The Hawkesbury and Nepean rivers form seven-eighths of the inland boundary of this county, which, notwithstanding its inferiority in size and the general character of its soil, is the most important and the most densely populated of them all, Sydney, the capital of the colony, being situated in it, and also the towns of Paramatta, Liverpool, Windsor, Richmond, and Campbell-town.

The maritime boundary is generally bold and deeply indented. For the distance of five or six miles from the sea, the country wears a bleak and barren aspect, consisting of ridges of stratified sandstone; the soil poor, in some places swampy, and clothed with a few stunted eucalypti and dwarf underwood.

Beyond this coast-girdle the aspect begins to improve; an undulating country extends for ten miles; and where the hand of civilization has not been in active operation, a stately forest of eucalypti, varied with a species of casaurina, appears, diversified here and there with farms and tenements, and intersected by broad and excellent turnpike roads; but the soil in this belt is still poor on the surface, as it rests on a sandstone formation. At the distance of twenty to twenty-five miles, the forest is lofty, but not dense; there is little or no underwood, and the average number of trees to the acre does not exceed fifty; while a charming variety of hill and dale, clothed with luxuriant herbage, is covered with bleating flocks and lowing herds, among which may be seen, at intervals, the spacious mansion or snug farm-house of civilized man. Throughout the whole of the county, from the sea-coast to the base of the Blue Mountains, the land can scarcely be considered elevated, but is a continued series of undulations, until it approaches the Nepean and Hawkesbury rivers, which are bordered by extensive plains of extraordinary fertility. Formerly, one immense tract of forest land, covered with very heavy timber, extended with little interruption from below Windsor to Appin, a distance of fifty miles; of which a large portion is now cleared and under cultivation. The rocks in this tract are either

common or calcareous sandstone, ironstone, and in some few places whinstone: these form soils of various degrees of goodness, the whinstone generally the best. In some places small pebbles of ironstone, not larger than peas, may be found scattered over the surface. This, wherever it occurs, is a sure sign of a poor hungry soil.*

Prospect Hill, the most conspicuous eminence in Cumberland, is situated near the centre of that county. It is cultivated nearly to the summit, and the rich red soil on the trap rock is remarkably productive.

The land, on approaching Port Jackson from the southward, appears low, compared with the coast of the Illawarra district: the cliffs near Port Jackson are about 200 feet in height; and in general effect and outline, though darker coloured, not unlike the far-famed Dover cliffs of Albion.

Suddenly an abrupt breach is seen in this sea-wall, against which the vast volume of water in the Southern Pacific is rolled with incessant swell; but the moment the tempest-tossed mariner has fairly passed through this singular cleft or fissure, the waters are as tranquil as a mill-pond. On the south head of the entrance of Port Jackson an excellent lighthouse† was erected by governor Macquarie, which captain Stokes says he saw, in H.M.S. *Beagle*, at a distance of thirty miles, from a height of fifty feet, during the period of a clear atmosphere.

The capital of New South Wales, named in honour of Viscount Sydney, his Majesty's secretary of state for the colonies in 1788, is situated in 35° 52' S. lat., 151° 17' E. long. For nearly a quarter of a century after its original establishment on the shores of Sydney Cove (Port Jackson), the now important city was little more than an insignificant village of bark huts and wooden skillings, scattered here and there among fields and gardens. Soon after the arrival of governor Macquarie, a survey was made of the whole locality, and the future town marked out on a regular plan.

Sydney is built partly on a small promontory, and partly in a narrow ravine or valley.

* *Account of New South Wales*, by James Atkinson, Esq.

† The lighthouse is in 33° 51' 40" S. lat., 151° 16' 50" E. long.; the tower is admirably built; the height of the light (a revolving one) from the base being 76 feet, and above the sea 277 feet,—total 353. The inner S. head bears from the lighthouse N. by W. $\frac{3}{4}$ W. distant a mile and-a-quarter. The outer N. head bears from it N. by E. two miles. The inner S. and

outer N. heads lie N.E. $\frac{1}{4}$ E. and S.W. $\frac{1}{4}$, of each other distant a mile and one-tenth. The light can be seen from S. by E. to N. by E., and from a ship's deck, on a clear night, eight to ten leagues, appearing like a luminous star. Bearings magnetic, distances nautical—variations 9 degrees E.

N.B.—The N. end of the "Sow and Pigs" rocks, near which there is a light, bears from the inner S. head S. W. by W. half a mile.

The formation on which it stands is a free-stone rock, which passes inland for about two miles, in undulating and nearly parallel ridges, in a direction almost due south of that portion of Port Jackson generally known as the *Stream*, or *Middle Harbour*, which, with Sydney Cove and Darling Harbour, encloses greater part of the city on three sides. The ridges decline as they recede from the Middle Harbour, until they terminate in an almost level plain, bounded on the south by a transverse range of elevated rock, known as the Surry hills, which comprise the southern suburbs.*

The views from the higher part of the capital are bold, varied, and many of them very picturesque; the magnificent harbour of Port Jackson, like a lake studded with islets, indented with coves of singular beauty, whose tranquil recesses afford a secure haven to hundreds of vessels, is ever an attractive object; while inland, the diversity of hill and dale, of rock and woodland, of grassy slopes and brilliant parterres, interspersed with princely mansions, cottage ornées, and substantial homesteads, combine in forming many charming prospects.

The position of Sydney admirably adapts it for the centre of a commercial empire. Its haven, which is about fifteen miles long, and, in some places, three miles broad, is completely land-locked. Along the water-side, except that portion occupied by the demesne contiguous to government house, there are wharfs, stores, ship-yards, mills, various manufactories, distilleries, steam engines, breweries, &c.; behind these, in irregular succession, rise the numerous public and private buildings of the Australian metropolis. In several parts, ships come close alongside the wharfs, and their cargoes are hoisted direct from the hold into the warehouses. The streets are laid out generally at right angles; thirty-four of them

* By an act for regulating the police in the town and port of Sydney, and for removing and preventing nuisances and obstructions therein, which came into operation 30th September, 1833, the boundaries of the town of Sydney, port of Sydney, Sydney Cove, and Darling Harbour, were thus fixed:—

Town of Sydney.—Bounded on the north by the waters of Port Jackson, from a land-mark at the head of Blackwattle Bay to Rushcutter's Bay; on the east by the stream entering Rushcutter's Bay, to a bridge on the South Head Road, at the north-west corner of Sydney Common; and by the western boundary of that common to a road extending westward to the back of Cleveland House; on the south by that road and its western fence, prolonged to a land-mark on the road to Cook's River; on the west by the western side of the road to Cook's River, and

have each a carriage-way of not less than thirty-six feet, (several have from forty to sixty feet), and a foot-way of not less than twelve feet. Their length varies from one to three miles; they are well paved or macadamized, regularly cleaned, watered, and lit with gas. George-street and Pitt-street have continuous ranges of handsome cut stone or brick edifices, with shops that would do no discredit to Regent or Oxford-street, London. Indeed, the modern structures generally, may, in several respects, fairly vie with those of an European capital; and many of the older houses, though constructed with little pretensions to taste, were yet (owing to the abundance of good brick earth, and excellent building stone, so easily obtainable,) strongly and usefully built; and, with their neat gardens in front, present a cheerful appearance.

The recently-erected government-house, which stands in a conspicuous position, overlooking Sydney Cove, is a very handsome structure, built of white freestone, in the Elizabethan style of architecture. Its foundations are laid in the solid rock, out of which the basement and cellars are quarried; and the whole tower, at the north end, seventy feet high, and twenty feet square, with a flag-staff, thirty feet high, forms a striking feature from the harbour, of which the house commands a fine view. The building is 170 feet long, and 40½ high; the ball-room, 50 feet by 28 feet; drawing-room, 40 by 28; ante-room, 15 by 28; dining-room, 45 by 26. All the rooms are 26 feet high, and finished in superb style; the staircases are of carved cedar, and the chimney-pieces of fine colonial marble. The cost to the colonists has, I believe, been between £50,000 and £60,000. The contrast is very great between this princely mansion and the canvass house of the first governor of New South Wales, or with the that line prolonged to the land-mark at the head of the Blackwattle Bay.

Port of Sydney.—The channel extending westward from the heads of Port Jackson to Long Nose Point, including Sydney Cove, Darling Harbour, and extending one mile up Middle Harbour, and the various other bays or inlets on each shore thereof.

Sydney Cove.—The waters included within a line extending from Dawes' Point to the north-west bastion of Fort Macquarie, and the shores to the southward of this line.

Darling Harbour.—The waters included within a line extending from Dawes' Point to the south-east point of the shore nearest to and opposite to Goat Island; the shores of this harbour on the side of the town, and those opposite to them.

wretched wooden tenements in use for several years.

There are numerous temples dedicated to the worship of God; among which are, five large and commodious Episcopal churches, besides a missionary Congregational church; three Presbyterian churches; two Roman catholic—St. Mary's cathedral and St. Patrick's church, both spacious edifices, highly ornamented; five or six Wesleyan chapels; a Baptist chapel; one Australian Methodist chapel; a Friends' meeting-house; and a Jewish synagogue.

St. Andrew's Cathedral was constructed as the Episcopal church of Australia, on the creation of a diocese in communion with the church of England; the foundation stone was laid in May, 1839, under the auspices of the first bishop of Australia. This handsome edifice is 720 feet from east to west, including the tower, whose pinnacles have an elevation of 120 feet. The height of the body of the church is seventy feet. It will contain a congregation of about 2,000. The expense of its erection is estimated at £50,000, towards which the inhabitants contributed largely; one family alone, that of Robert Campbell, M.C., subscribed £500.

The Roman Catholic Cathedral is the largest and most expensive sacred edifice in the colony; it was commenced in 1820, and it is not yet completely finished. Built of freestone, in the form of a cross, it is an excellent specimen of Gothic architecture, and being situated in a commanding position in Hyde-park, is now an ornament to the city.

St. Phillip's Church has a peculiar interest attached to it, as being the oldest place of worship in the colony. Commenced in July, 1793, it was several years before it was fitted for the celebration of divine service. George the Third regarded its erection with deep

interest; and not content with expressing his satisfaction that such a building was in progress, his Majesty forwarded to the colony (from his private purse) a costly communion service of plate, which arrived safely in October, 1803, and is still used in this church. The earnest solicitude evinced by the king expedited the building, which was consecrated on Christmas Day, 1810. It is a plain, useful structure, with a round tower which commands an extensive prospect.*

St. Andrew's Kirk, a handsome Gothic church, was commenced in November, 1833, and finished in September, 1835. The walls are elevated, and include a spacious area, there being a projecting entrance in front, leading to the gallery. Between the main windows there are square buttresses, and two circular turrets surmounted by pointed spires. The interior is admirably fitted up; the groined arches of the ceiling rest upon six fluted columns with ornamented capitals; the cedar pannels and Gothic framing are particularly handsome. The government gave the site for the building, but the cost of the kirk was chiefly defrayed by subscriptions from members of the established church of Scotland.

St. James' Church occupies a commanding site at the north end of Hyde Park. The foundation was laid in October, 1819, by governor Macquarie, and it was completed about the end of 1822. It is in the Grecian style of architecture, with a lofty spire and belfry, and is constructed of bricks, strengthened by large and handsome pilasters of freestone. There is a superior organ at the end of the church, and the pulpit is of excellent workmanship.

The Scots' Kirk is a substantial plain building, and the other temples of worship are well constructed. As population in-

* The deep interest taken by the "good old king" in the establishment of the first Christian church erected at the antipodes, where there are now five Protestant dioceses, viz., Australia (Sydney), erected in 1836; New Zealand, 1841; Tasmania (Van Diemen's Land), 1842; Melbourne (Port Phillip), 1847; and Newcastle (New South Wales), 1847—was in unison with his well-known piety of character; a piety in the exercise of which he continued to manifest the reasoning power, in other respects entirely dethroned. During the awful lunacy with which the mind of George the Third was afflicted, his spirit remained unclouded in its devotion, and during his wonted hours of prayer, his Majesty's supplications were daily uttered to the Almighty disposer of events—that the Lord of Heaven and Earth would bestow especial care and favour on the nation, deprived by His will of the superintendence of their lawful sove-

reign, and that He would be to the people of these realms their temporal as well as spiritual King, directing aright the counsels of those to whom the supreme power was delegated. The transmission of a communion service to St. Phillip's church at Sydney, is in perfect accordance with the deep reverence of his Majesty for that holy and indispensable ordinance. It is not generally known that some time before the demise of George the Third, his Majesty expressed an earnest desire to receive the Sacrament. The clergy and the medical attendants on his Majesty did not think it advisable to grant the request, whereupon the king solemnly administered the bread and wine to himself, with a fervent prayer that if in this he committed the sin of presumption, he might be forgiven—no other means being left for his obedience to the divine command, or the satisfaction of his deep yearning for the comfort of the Holy Sacrament.

cesses, new churches and chapels are built, and Sydney is, on the whole, better provided with the means of enjoying public worship, than many districts of London—where, it will be remembered, there was recently one parish with 20,000 inhabitants, and only one church.

The *Sydney College* owes its existence chiefly to a private individual, Dr. Bland, who was originally a surgeon in the royal navy, but was transported along with a lieutenant of the ship in which he served, for being engaged in a fatal duel with another officer of the ship. Dr. Bland has long been known as the good Samaritan of Australia; possessed of great skill in his profession, of high general attainments, a gentleman by birth, education, and feeling, he acquired the esteem of general and lady Darling, and of all classes in the colony. Wealth was poured freely into his hands by the affluent, and its recipient as quickly passed it away to the poor; not satisfied merely with contributing both by his skill and pecuniary charity, to alleviate the physical suffering of his fellow-creatures, Dr. Bland took the lead in the formation of a grammar-school in 1825; in 1828-9 the worthy doctor made a successful effort to enlarge and improve the institution; in 1830 the grammar-school expanded into Sydney College, with a fund of £10,000, subscribed in 200 shares of £50, each share entitling the holder in perpetuity to the nomination of one student at the college. The Old and New Testament are read without note or comment; no religious book is used without the authority of the president, and a committee of fifteen members, elected annually by the aggregate body of trustees. The building is commodious, and the course of education in classics, mathematics, and natural philosophy, good.

The *Australian College* was instituted 31st December, 1831; it combines a series of schools for the education of youth in the elementary branches of education, and gradually extends to the higher course of instruction. The buildings are in chaste style, large, and capable of containing more than 100 boarders; like the Sydney College, it is not confined to any particular religious denomination. A chapter in the Bible is read by each teacher every morning in the presence of all the pupils attending his class.

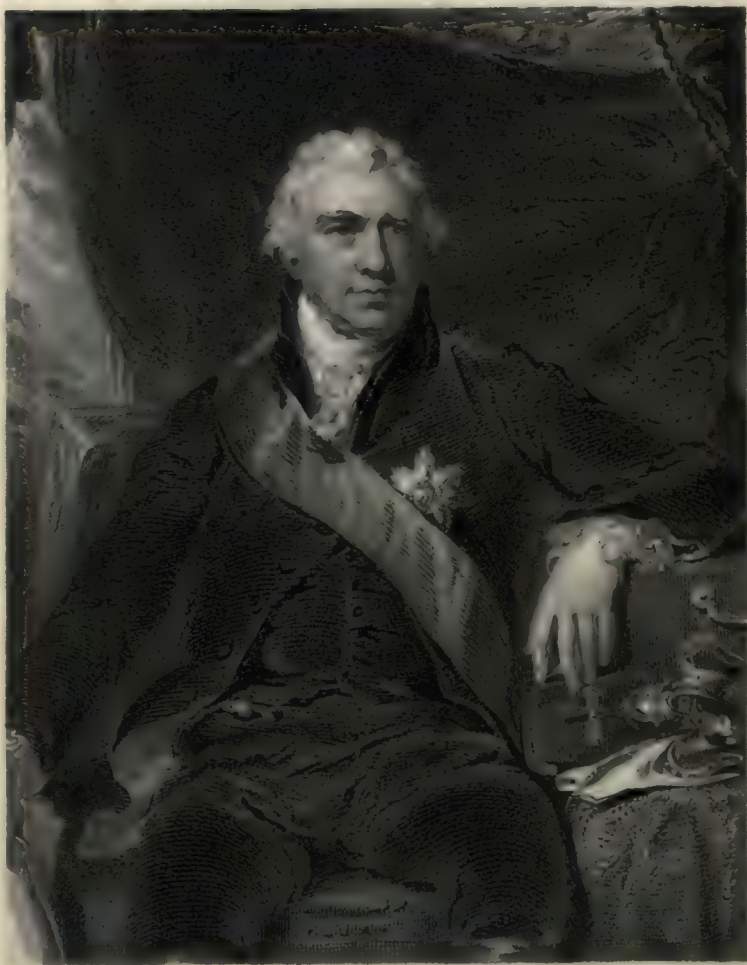
There is a *Normal* institution for secular education alone, and many excellent semi-

naries for both sexes. The Sunday schools are well attended.

Among the other public structures in Sydney, is the *Theatre Royal*, which cost £10,000 in building; the colonists truly aver, that it "would be an ornament to the Great Babylon." The architectural description given of it, is as follows:—

"In front of the theatre there are two splendid shops, between which there is a spacious entrance to the lower and upper boxes, enclosed by a pair of massive iron gates. The saloon leading to the two tiers of boxes, is divided for an entrance for each portion of the visitors. The interior of the house is arranged into two circles of boxes, with several private and family boxes; an extensive pit, with raised seats, and a spacious gallery. To the lower circle of boxes is attached an elegant dress saloon, 40 feet by 20. The size of the theatre is 100 feet by 53; the stage, 52 feet by 47; the opening of the proscenium, 8 feet; distance from front to front of the boxes, 27 feet; also, a commodious orchestra, with the necessary green and dressing-rooms; the height of the building is 50 feet. The whole is fitted up in the modern style, with a handsome glass chandelier in the centre of the roof, and the building is so arranged, that in case of fire, all parts of the house have communications for escape."

The theatre was erected by Mr. Barnett Levy. In the early days of the colony, the "legitimate drama" was performed in the gaol of Sydney. The public Banks are all substantial, and, in some instances, ornamented buildings; the Head Police Office, Benevolent Asylum, Prisoners' Barracks, Post Office, deserve a record for their suitability to the purposes for which they were constructed. The Soldiers' Barracks are large and plain. Indeed, the number of good mechanics among the convicts, and the vigilant superintendence of engineer officers, have materially contributed to secure for Sydney a very superior order of public edifices. A handsome range of stone buildings, with a noble colonnade forming a verandah and balcony, contains the *Legislative and Executive Council Chambers*, and two spacious Hospitals. The *Court House* is built on an eminence in that portion of the suburbs termed the Surry hills, and adjoining it is the *New Gaol*, an excellent building well arranged for the classification and separation of prisoners. The gaol covers a considerable area of ground, it is erected on a hill, built of freestone, and surrounded by a massive wall thirty feet high. The *Custom House* and the *Public Library* are designed upon an equally extensive and substantial scale. The *Public Markets* are held in a double range of narrow buildings about 200 feet in length, floored with freestone, the roofs



SIR JOSEPH BANKS, BART. K.B. P.R.S.

OR 1820.

FROM THE ORIGINAL OF SIR THOMAS LAWRENCE, P.R.A.

THE BRITISH MUSEUM

being supported by stone piers. A fountain of water in the centre of the amphitheatre tends to preserve cleanliness; at seven in the morning the ringing of a great bell announces the opening of the market, and throughout the day a vigilant police preserves order. The position of the market-place, in the centre of the city,* its commodious construction, and the peaceable manner in which business is carried on, enhance the effect produced on the eye of a stranger by the abundance, excellence, and cheapness of its varied supplies, and combine to form a scene which, could it be viewed by our over-worked and under-fed operatives, would preach more effectively in the cause of emigration to a *British colony*, than other arguments, though eloquent and sincere, and teach a new lesson to many of our political economists.

There are several small forts, but, as explained under the head of *military defences*, there is no protection where most needful—at the Heads of Port Jackson. The defences of the harbour are shewn in an official statement.

Fort Macquarie is situated at the extreme point of the eastern entrance to Sydney Cove, the access to which it directly commands. It is a permanent work of masonry—a square of 30 feet face, having a small circular bastion at each angle affording space for one traversing gun. Three faces of the square are open to the sea, one of which is pierced for three guns. Ten twenty-four pounders are mounted. The *terreplein* is twenty-two feet above the level of the sea. In the centre of the land face is a two-storied tower, with a magazine in the basement calculated to hold 350 barrels of gunpowder. The tower is intended to cover a small detachment of soldiers, with the necessary stores for the battery. The land communication is by a permanent bridge over a dry rock. This work will take in reverse any work erected on Pinchgut Island, from which it is distant 1,062 yards. A non-commissioned officer and twelve men are at present quartered in the tower; not more than six men in addition could be put under cover.

Fort Phillip is situated on the highest ground within the northern portion of the city; it appears to have been the intention

to construct a pentagon at this point, the sides measuring 100 feet. The work was commenced in 1804, and partly carried up to the height of eighteen feet, six inches; nothing further was done, the plan of the work, it is presumed, being found defective. The situation is highly favourable for a work of defence (a citadel), at an elevation of 157 feet above the sea; it commands a great part of the city of Sydney, the anchorage, and the access to Sydney Cove and Darling Harbour. It also takes in reverse Dawes' Battery, at the distance of 715 yards; Fort Macquarie, at 1,062 yards; and Pinchgut Island, at 2,124 yards. Six six-pounder guns are placed on one of the faces of the old work, for the purpose of a saluting battery. There is a permanent magazine at this point for 200 barrels of gunpowder; but no accommodation for troops.

Dawes' Battery is situated on the point forming the western extremity of Sydney Cove, which it separates from Darling Harbour. The work consists of an open *barbette* battery, capable of mounting six twenty-four pounders. It immediately commands Fort Macquarie, at a distance of 728 yards, and also commands the approach to, and anchorage in, the Cove. The platform of the battery is at an elevation of seventy feet above the sea, to which the glacis extends. There is no accommodation for troops.

Bradley's Head is a commanding point on the right approach to the city of Sydney by sea, distant about 4,596 yards. The battery, when completed, will mount seven twenty-four pounders. The site is important, commanding, as it does, the ship-channel, at 1,000 yards. Ships forcing this passage would immediately come under fire from a work at Pinchgut Island, distant 2,834 yards. This work was suspended in 1842, by order of the inspector-general of fortifications. There is no accommodation for troops.

Pinchgut Island is situated nearly mid-channel, on the approach to the city of Sydney, 1,062 yards from Fort Macquarie. A work on this point was put in progress in 1841, but suspended soon after, by orders from England. The work would intersect the fire from Bradley's Head, on the approach up the harbour, and would be supported by Fort Macquarie and Dawes' Battery. Vessels must pass within point-blank range of this spot.

Goat Island Magazine, at the entrance of the Paramatta river, is the principal dépôt for

* No beast can be killed in Sydney without inspection and certificate from an inspector appointed by the government, and for the inspection a fee of threepence is paid. All slaughter-houses are licensed.

gunpowder; there is a bomb-proof magazine capable of containing 3,000 barrels of gunpowder. There is barrack accommodation for a non-commissioned officer and a guard of twelve men, for the protection of the magazine.

The number and calibre of the guns in these forts is—mounted, 24; dismounted, 13; unserviceable, 15. Of the mounted, 16 are twenty-four pounders, 1 twelve-pounder, 1 nine-pounder, and 6 sixteen-pounders. Of the dismounted, 2 are twenty-four pounders, 4 are twelve-pounders, 2 are six-pounders.

Building land in Sydney is let at a very high rate; in George-street (the Regent-street of New South Wales) it has been sold at £20,000 per acre, and some ground at the rate of £50 per foot. Large sums have been expended on shops, stores, and ware-rooms; one auctioneer spent £5,000 in the enlargement of his premises. Hotels and inns are numerous; some on a large scale, which, in luxurious appointments and high charges, may vie with the first-rate hotels in the parent state. The *Royal Hotel* has, it is said, already cost £30,000, and will require a like sum for its completion. The ball-room and the coffee-room are of noble dimensions; the private apartments spacious and superbly furnished, and the dormitories "scarcely to be counted."

The colonists are not sparing in efforts to improve and adorn the metropolis. There is a circular quay at Sydney Cove, on which there has been expended up to December, 1848, £27,709. The building for the colonial museum at Sydney has already cost in its construction about £6,000. On the new government-house, the residence of the representative of the queen, no less than £50,000 of the taxes raised from the colonists have been expended on the structure, although the original estimate was not more than £25,000. The new prison at Darlinghurst cost the colony up to December, 1848, fully £51,000. A general cemetery, termed the Necropolis, has been aided with £5,000 of the colonial revenues. New barracks have been built for the use of her Majesty's troops, and £60,000 have been appropriated for the purpose. More than £1,000 have been employed in making a dry dock at Cockatoo Island.

Hyde Park, a piece of land about two miles in circumference, has been judiciously reserved as a pleasure-ground for the citizens, and from its elevated and agreeable position will, when planted, surpass in beauty any of the parks attached to European capi-

tals, except Hyde Park, London, Phoenix Park, Dublin, and the Prater of Vienna. The Sydney gardens justly rank among the chief attractions of the city, and are situated on a slight elevation which rises gradually from a picturesque and secluded cove on the eastern side of the capital, and are distant about five minutes' walk from the new government-house. The site, plan, and arrangement of these gardens are all good. A stone wall, twenty feet high, which runs east and west, divides them into two portions. That on the south and land side is elevated, and devoted chiefly to botanical purposes: a magnificent pine of that most magnificent species, well named the *auracaria excelsa*, planted more than thirty years ago, first attracts the eye, while all around coral trees, with their rich scarlet flowers; bread-fruit trees from the Sandwich Islands; pomegranates; acacias, covered with beautiful parasites; bananas, Banksia, many descriptions of palms, and an infinite variety of other tropical trees are to be seen flourishing luxuriantly in the same ground with the oak, ash, and other English trees and plants. The northern or sea-coast garden extends for nearly a mile along the shore, and is laid out in winding walks, arbours, shrubberies, green slopes, and grassy terraces, elevated a few feet above the murmuring ripple of the glassy wave. In the centre of the garden is a pond surrounded by weeping willows of immense size, and in the centre stands a plain granite obelisk, dedicated to the memory of Allan Cunningham, the celebrated Australian botanist and traveller, whose indefatigable exertions and correct taste contributed materially to the formation of these gardens.* The government demesne, close to the gardens, is a well shaded and pleasing drive; and during the week-days the performances of one of the bands belonging to the regiment stationed at Sydney, adds to the pleasure of the gardens, which however seldom present so animated a scene as on Sundays, when thronged by all classes of the citizens.

Sydney is supplied with water, partly by wells sunk fifteen to thirty feet below the surface, and partly by a tunnel or subterraneous aqueduct, about two miles and-a-quarter long, which conveys water from the Lachlan swamp to the south-east end of the city. Four-fifths of the tunnel, the whole of which averages five feet in width, and the

* *Sketch of New South Wales*, by J. O. Balfour, Esq., 1845.

same in height, is excavated in the solid rock, and the remainder is formed through sand, with chiselled masonry without cement. There are three offcuts, one forty-five feet in length, another eighty feet, and a third 284 feet, all of the same depth and width as the main tunnel; the entire mass of excavation throughout the work amounted to 255,930 cubic feet. Springs (met with in the progress of the work) furnish additional supplies to the aqueduct. The tunnel was commenced in September, 1827, and the expenditure on it up to the 30th of June, 1837, was £22,971. It furnishes water for about 30,000 of the citizens.

Sydney was incorporated in 1842, and the charter of incorporation entitles the citizens, holding tenancies of £25 per ann., to the control over all local affairs, excepting the police, the management of which still remains vested in the executive government.

The corporation of the city, under the authority of an act of the colonial legislature, 6 Vict., No. 3, section 67, levy a rate, by assessment, on the inhabitants of the city; and under the 70th section of the Act of Incorporation, a police rate is raised by assessment. There are other sources of income for the corporation, viz.—a water rate for water laid on to houses; lighting rate; rent of three fountains in the city; markets, fines, fees, and licences. The revenue raised, under several heads, was—

Items of Revenue.	1845.	1846.	1847.	1848.
City rate assessed	£2,621	£2,086	£5,461	£6,037
Police fund	3,115	—	—	—
Markets, dues, and rents	2,344	2,225	2,488	2,600
Fees and fines	862	1,086	1,323	1,873
Licences, &c.	12	6	—	—
In aid of city fund	129	14	—	—
Water rate and licence	—	1,199	1,331	1,863
Lighting rate	—	—	804	216
Total	10,191	6,618	11,409	12,691

* In compliance with the wishes of correspondents that this work should be a reference for mercantile men as to the commission, agency, and other charges in our several colonies, I give the following data relative to New South Wales; but at the completion of the whole work there will be given with the last volume a statement of the rates of interest of money, commission and agency charges, rates of insurance, tariff of customs, &c., in the several dependencies of the British crown.

General rates of agency, commission, and warehouse rent, agreed on at a meeting of the New South Wales chamber of commerce:—

Commission per cent.—On all sales or purchases of ships and other vessels, houses or lands, where no advance on them has been made, 2½; on all other sales, purchases, or shipments, 5; on goods consigned, and afterwards withdrawn, or sent to public auction, if no advance on them has

The mayor of Sydney has an annual salary of £800; and eleven other different officers of the corporation have salaries amounting, in the aggregate, to about £2,200. The repairing of the streets of the city costs about £8,000 a-year; the water-pipes and repairs of fountains, £2,200; the lighting, £700. The police of the capital, and of the colony generally, are paid out of the general revenues: the cost for 1848, was—city police, on land, £7,464; water ditto, £1,432; these charges are irrespective of the police in the interior, which cost, during the year 1848, within the settled districts, £21,229; mounted police, £9,177; native ditto, £227; showing a total annual charge for police in New South Wales of £39,529.

The census of March, 1846, gave the census of the city—males, 20,810; females, 17,548 = 38,358. The suburbs, at the same period, stood thus—Balmain, males, 682; females, 655: Camperdown, males, 125; females, 176: Canterbury, males, 128; females, 64: Chippendale, males, 219; females, 197: the Glebe, males, 538; females, 522: Newtown, males, 631; females, 584: O'Connellstown, males, 25; females, 15: Paddington, males, 422; females, 404: Redfern, males, 437; females, 428: St. Leonard's, males, 223; females, 189: Surry hills, males, 121; females, 86. Total in the suburbs, males, 3,546; females, 3,286 = 6,832. Thus, in March, 1846, the city and its environs contained 45,290 English, or English-descended inhabitants. It now [March, 1850] contains, probably, about 60,000 of the Anglo-Saxon race.

Sydney has a Chamber of Commerce, which is composed of the merchants, ship-owners, and others interested in the trade of the colony.* An *Australian Club* was instituted in the year 1838, and numbers about

been made, 2½; on giving orders for the provision of goods, 2½; on guaranteeing sales, bills, bonds, or other engagements, 2½; on the management of estates for others, 5; on procuring freight or charter on passage money, and on freight collected, 5; on insurances effected, ½; on settling losses, partial or general, 1; on effecting remittances, or purchasing, selling, or negotiating bills of exchange, 1; on the recovery of money, 2½; if by law or arbitration, 5; on collecting house rent, 5; on attending the delivery on contract goods, 2; on becoming security for contracts, 5; on ships' disbursements, 5; on obtaining money on respondentia, 2; on letters of credit granted, 2½; on purchasing, selling, receiving from any of the public offices, lodging in ditto, delivering up, or exchanging government paper, or other public securities, ½; on all items, on the debit or credit side of an account on which a commission of 5 per cent. has not been previously charged in the same account, including government paper, 1; on entering and clearing ships at the custom house, each 1 guinea.

Warehouse rent.—On all measurement goods, 1s. per ton of 40 cubic feet per week; on liquids, 1s. 1d. per tun of 253

300 members. The club-house, which has cost nearly £10,000, contains good accommodation; the entrance fee is £30; the annual subscription, £7 10s. The society met with at the Australian Club is, in point of good breeding and general intelligence, quite on a par with the generality of London clubs, and the rules by which it is governed equally stringent, not to say exclusive. There is, indeed, excellent society in Sydney for the most punctilious gentleman; he may choose his acquaintance from the thirty-six members of the Legislative Council, the bishop, archdeacon, and other clergy; the three judges; law officers of the crown; the officers of the troops stationed in the colony; the members of the government; the magistracy; numerous members of the medical and legal professions; and landed proprietors, and mercantile men of all grades. At the balls and assemblies in the capital, the beauty and elegance of the Australian belles is a theme of general admiration; and many a born Englishwoman finds herself eclipsed by the fair face, fine form, and witching graces of the "currency lasses."*

Sydney has its *omnibi* as well as London; they ply constantly between Paddington, on the South Head road, and the Star hotel, George-street, and between other parts of the city; hackney-carriages and cabs are also numerous.

There are several well-appointed four-horse coaches, such as could not now be found in England, plying between Sydney and Paramatta, Windsor, Richmond, Liverpool, and other towns in the interior. There is also a regular stage conveyance to Melbourne, Port Phillip. The several mail-coaches for the western and southern districts leave the post-office, Sydney, every afternoon (Sundays excepted), at five o'clock. The *Age*, *Australian*, and *Water-witch* four-horse coaches leave Sydney daily (*Sundays excepted*), for Windsor and Paramatta.

Fast and commodious steam-boats ply daily, morning and evening, between Sydney and Paramatta; and there is constant steam communication with Hunter's River, Port Stephens, Port Macquarie, and also with

Melbourne, Port Phillip, Boydtown, and other rising places south of Port Jackson.

Some of the recorded statistics of Sydney indicate the state of the city. Thus, in 1844, there were "eighty-six licensed stage-coaches plying in Sydney; 186 licensed draymen; and twenty-four licensed porters. The total number of licensed slaughter-houses for the year was fourteen: there are about 130 licensed watermen plying within the boundaries of Sydney. The total number of dogs registered in Sydney is only 1,766: there is reason to believe, that the number prowling about the streets, without any ostensible owner, is upwards of 3,000." It is fortunate that hydrophobia is unknown in Australia.

The Sydney post-office has been, for the last quarter of a century, under the management of an able and zealous postmaster-general, James Raymond, Esq., who has carried into effect numerous improvements. The metropolis holds communication with four districts in the colony—the western, southern, northern, and coast districts. The *western*, in 1848, contained fourteen district post-offices, the most distant (Wellington) being 230 miles; and the second nearest (Paramatta) fifteen miles; the letter-charge to the latter is fourpence; to the former, tenpence. At Paramatta the delivery is twice daily; at six other places, daily; and, at the others, twice or thrice a-week. In the *southern* district there are thirty-five district post-offices; the nearest (Liverpool) is twenty miles, and the most distant (Belfast) 817 miles; the despatches are five daily, and the remainder twice and thrice a-week. The *northern* district has twenty-four post-offices, to each of which there is a daily, bi, or tri-weekly despatch. The *coast stations* have their post-office deliveries and despatches regulated by the steam-packets plying between them and Sydney. The number of letters despatched from Sydney post-office, in 1843, was 822,733; and the number of newspapers was 905,709. Compared with 1837, the number of letters had increased two-and-a-half-fold; and the newspapers three-and-a-half-fold. The post-office

gallons (old measure), per week; on sugar, rice, salt, and similar articles, 6d. per ton per week; on grain, 4d. per bushel for first month, and one half-penny per bushel, per week afterwards; on iron, lead, &c., 4d. per ton per week.

The following are the premiums charged by the Australian Marine Assurance Company for insuring vessels and merchandize:—

Per cent.—Sperm fishery, for twelve months, 8 to 10 guineas; ditto, for the voyage, 8 to 14 guineas; Hobart Town, to or from, 1 guinea; Launceston, ditto, 1½; New

Zealand and South Sea Islands, per month, 1; Manilla and China, to, 2½, from, 3; Madras, Bombay, and Calcutta, to or from, not including risk through Torres' Straits, 3; Mauritius, ditto, ditto, 2 to 4; Cape of Good Hope, ditto, ditto, 2½; United Kingdom, ditto, exclusive of war risk, 2½ to 3½; Rio de Janeiro and Bahia, ditto, ditto, 2½.

* For some years there were two denominations in the circulating medium, sterling and colonial currency; the European born obtained the name of *sterling*, and the colonial that of *currency*.

collections, at present, amount to about £15,000 a-year.

The distances, in English miles, of the different post towns in the colony, in 1848, from Sydney, are thus stated:—

Western District—Hyde, 8; Paramatta, 15; St. Mary, 29; Penrith, 33; Windsor, 34; Richmond, 39; Hartley, 78; Bathurst, 113; O'Connell, 125; Carwar, 144; Mudgee, 150; Molong, 163; Canowindra, 176; Wellington, 230.

Southern District—Liverpool, 20; Camden, 33; Appin, 43; Picton, 46; Wollongong, 64; Dupsto, 72; Berrima, 81; Kiama, 88; Shoalhaven, 103; Marulan, 108; Bungonia, 117; Huskisson, 121; Goulburn, 125; Gunning, 152; Bungendore, 161; Ulladulla, 163; Braidwood, 164; Yass, 117; Queanbeyan, 182; Broulee, 209; Gundagai, 244; Ovens, 429; Seymour, 528; Kilmour, 549; Melbourne, 587; Ballan, 637; Geelong, 641; Grange, 773; Belfast, 817.

Northern District—Patterson, 10; Carrington, 16; Clarencetown, by water, 24; Gresford, by water, 25; Wollombi, by water, 27; Singleton, by water, 31; Dungog, by water, 45; Jerry's Planes, by water, 46; Muswellbrook, by water, 59; Merton, by water, 66; Scone, by water, 75; Murrurundi, by water, 99; Cassilis, by water, 125; Armadale, by water, 150; Tamworth, by water, 154. The distance of the other post towns by water to the north and south of Sydney, is not laid down. Since 1848 several other post towns have been added to the above list.

There are no railroads as yet in New South Wales, but it is probable that ere long tram roads at least will be made. The iron and other hard woods of Australia would serve in the first instance instead of iron rails; by this means roads might be made round the head of Botany Bay, through the valleys to the southward, through the rich Maneroo country, and towards Illawarra. Another trunk line would lead to the north-western regions. Sooner or later New South Wales, Port Phillip, South Australia, and subsequently Western Australia, will be connected by railroads, for the colonists have plenty of iron, coal, and wood, for their construction, and the want of navigable rivers will necessitate the adoption of this mode of locomotion. Mr. Woore has set forth a project for a railway to connect Windsor, Penrith, Ellerslie, Vermont, the Oaks, Bong-Bong, and Goulburn with Sydney. The main line from Sydney to Goulburn, is 122 miles; the Windsor branch, 13½

miles; Ellerslie branch, 10½ miles; Penrith branch, 8½ miles = 154½ miles.

Whereas the distances from Sydney by the present lines of road are—to Paramatta, 14; Windsor, 39; Penrith, 33; Goulburn, 125; Bong Bong, 80; Camden, 39. Of these 154½ miles of railway, fifty-four miles run through government land, and 102½ miles through private property. Twenty miles is already cleared of timber, and 134½ miles to be cleared. Supposing the line to be three chains wide, or 198 feet, and 154½ miles long, it would contain 3,708 acres, 2,460 of which would be through private property, and 1,248 acres through government property. In the course of the line, with the exception of the Windsor branch, there are, besides the formation of the road, eight deep cuttings, and seven side cuttings. The erections are, five termini, seven stations, two brick or stone viaducts, ten second-class wooden viaducts, eight first-class bridges, twenty-three second-class bridges, eighty-three third-class bridges, seventy-four culverts, and about eight accommodation bridges.

By means of wooden instead of iron rails, the wheels of the locomotives "bite" closer, and steeper gradients may be ascended. The estimated cost of this line, with wooden rails, is £419,403, or only £2,714 per mile. Of this sum 275,000 sleepers, nine feet long, (rough square,) being for two lines on 154½ miles, each six feet from centre to centre, five shillings each, cost £68,000; making 154 miles of road cost £300 per mile = £46,200; eight cuttings, £16,000; seven-side ditto, £10,500; building bridges, culverts, stations, termini, draining, &c., about £120,000; laying sleepers and rails, £200 per mile, £30,900; 3,270,000 feet of scantling, 8 × 4, at twelve shillings per 100 = £19,620; locomotives, carriages, turn-tables, &c., £50,000. These details give some idea of the difference of cost between a railway in the United Kingdom and one in Australia. At Sydney excellent steam-engines are made; the carriages and everything required would be prepared in the colony.

Having, in the previous pages, carefully gathered together—even at the risk of offering what some may consider dry detail—the materials from which my readers may, I trust, be enabled to form a correct idea of this fair and youthful city, I may conclude with a few general remarks. My own feelings, on first landing, from the east coast of Africa,

were those of mingled delight and astonishment. I was not prepared to find, at the antipodes, a city so home-like, so thoroughly English in its character; nor could I have believed it possible that a colony of such comparatively recent establishment, founded too under very peculiar circumstances, could have acquired a degree of order, comfort, cleanliness, and security, not inferior to that which distinguishes some of the best and oldest cities of the mother country. Lest, however, it should be supposed that a bias in favour of this colony, or of the British colonies generally, influences (even unconsciously) my pen, in writing of them, I prefer quoting, as far as practicable, the statements of other writers, and citing the impressions produced on the minds of other travellers, instead of merely offering my own opinions.

Count Strzelecki, writing in 1839, says:—"Since my arrival in Sydney, I cannot help asking myself—Am I really in the capital of that 'Botany Bay,' which has been represented as 'the community of felons'—'the most demoralized colony known'? &c. &c. Let the authors of these and other epithets contained in the works they wrote on New South Wales congratulate themselves! My mystification was complete. The evening I effected my disembarkation in Sydney, I did it with all imaginary precautions, leaving my watch and purse behind me, and arming myself with a stick. I found, however, in the streets of Sydney, a decency and a quiet which I had never witnessed in any other of the ports of the United Kingdom. No drunkenness, no sailors' quarrels, &c., &c. Since then, how many nights like the first did I not witness, in which the silence, the feeling of perfect security, and the delicious freshness of the air, mingled with nothing that could break the charm of a solitary walk!"

Captain Stokes, R.N., of H.M.S. *Beagle*, who visited Sydney in 1840-1, says he was much struck with the strange contrast its extensive and at the same time youthful appearance presented, compared with the decrepid and decaying aspect of the cities in South America, which he had recently quitted, and which were founded two centuries ago, by a nation at that time almost supreme in Europe, upon the shores of a fertile continent. In Sydney he beheld with wonder what scarce half a century had sufficed to effect; for, "where, almost within the memory of man, the savage ranged the desert wastes and trackless forests, a noble

city has sprung, as though by magic, from the ground, which will ever serve both as a monument of English enterprise and as a beacon from whence the light of Christian civilization shall spread through the dark and gloomy recesses of ignorance and guilt."—(Vol. i. pp. 244-5.)

Mr. C. I. Baker, who recently visited Australia, describes very naturally the impression made upon strangers from the United Kingdom by the Australian metropolis. "Sydney is certainly an extraordinary place; and if the colony continues to progress as it has done during the last twenty or thirty years, it will, ere another generation have passed away, be one of the first cities in the world. A new-comer rubs his eyes, and repeatedly questions whether his long voyage has not been a dream, and he himself still in the mother country: the streets, the houses, the shops and other buildings, the carriages, including stage coaches, flies, and cabs, are all constructed as in England; the bustling busy population are all English or thoroughly Anglified; so also are the various customs of life, the goods displayed in the shops, the furniture, the grates with their coal fires, the style of living and mode of cooking, the wine, beer, &c.;—in short, from first to last, you have England, and England only."*

In another place, Mr. Baker bears the following testimony to the character of the people. It is after adverting to there being one, or sometimes two of her Majesty's regiments stationed at Sydney, and a great many sailors from all parts of the world frequenting the port, he adds—"Yet it is one of the most orderly towns a traveller can visit. I witnessed neither the brawl nor drunkenness, nor the shameless prostitution which so often shock and offend in our own streets; whilst the only beggars I met with were two blind men. Another proof of the prevalent order of the town is the general decorum observed on the sabbath. On the whole, great credit is due to the authorities for their excellent government of a population, amongst whom might be expected much disorder and unseemly immorality."—(pp. 132, 133.)

No government could, however, preserve the order and decency so manifest in Sydney, unless seconded by a strong sense of propriety in the inhabitants themselves, who attach great importance to the obtaining and maintenance of a good character

* *Sydney and Melbourne*. 1 vol. 1845.

and a fair fame;* and Mr. Baker speaks of having been struck by "the superior breeding, education, and intelligence of many of the settlers not locating in fellowship in any particular neighbourhood, but amply scattered throughout the colony—men, moreover, of unblemished character, active in mind and body, and of agreeable and open manners."

PARAMATTA, the second town in the county of Cumberland, was established, as we have already seen (p. 403), in the very early days of the colony. For a considerable time it was merely an *encampment*, or succession of huts, and the older settlers continued to speak of it as *the camp*, long after it had grown to be a village, and even a town. The name of Rose Hill, given by its first European inhabitants, has been happily superseded by the native designation of the river on which it is situated. The river is, however, chiefly a continuation of Port Jackson, its waters being salt until just beyond Paramatta bridge, where a dam thrown across by governor Macquarie, checks the further advance of the tide. The commissariat store, a large brick building, occupies a position at the extremity of the town, close to the beach, permitting boats to go alongside and have their cargoes hoisted up into its capacious granaries; while beyond this is a water-mill—a dam being here carried across, to keep up the necessary supply to work it.

The town extends over a considerable extent of ground, and is built along a small fresh-water stream, which falls into Paramatta river. The streets are regularly laid

* The diminution of crime of late years in Sydney, and throughout the whole territory of New South Wales, is very remarkable, and will be found detailed under the section on *Crime*, but it may be useful to give here a statement of the number of felonies in the colony for ten years—showing their number in proportion to the population, and to each 10,000 inhabitants; thus:—

Years.	One in each	To each 10,000 Inhabitants.
1839	148	67
1840	196	61
1841	208	48
1842	276	36
1843	294	34
1844	327	31
1845	362	27
1846	358	28
1847	449	22
1848	481	21

This shows an actual decrease of more than *forty per cent.*, and a relative decrease of crime of more than *sixty-eight per cent.* in ten years.

out—the principal of them, George Street, is about a mile in length; the houses, which are generally detached from each other, and partly surrounded with gardens, are mostly built of brick or white freestone—the latter being very abundant, and, from its excellent quality, much used for grindstones. The public buildings are substantial and well constructed. The government-house is agreeably situated on an eminence, in a somewhat extensive demesne, amid carefully tended gardens; Sir Thomas Brisbane, who made it his chief residence during his administration, erected an observatory, which he placed under the superintendence of a skilful astronomer, named Dunlop. There is an excellent institution for orphans, situate on the banks of the river. In the vicinity of Paramatta is a Convict Lunatic Asylum, which contained on 31st December, 1848, eighty-eight male, and ten female invalids; 104 male, and twenty-four female lunatics; to these are attached, as servants, ten male and one female convict. The town lies in a sheltered valley, and its climate, during the winter months, is delightful; but in the summer the heat is sometimes intense, the difference of temperature between it and Sydney being generally as much as from six to ten degrees.

Paramatta is a corporate town, having a municipal district council; the annual income is about £1,200, consisting chiefly of tolls. The cloth manufactured here has obtained a high character, not only in the colony, but also in the mother country; and a soft woollen fabric called "Paramatta," has become equally celebrated, being (I am told) now deemed by the ladies as indispensable an article in their mourning attire, as bombazeen was, in that of their grandmothers. Several other manufactories have been recently established in the neighbourhood. A recent writer says, that "a silk institution has been formed there, under able management, and mulberry planting on a large scale has been commenced;"† and in the same work it is elsewhere stated, that extensive works for the smelting of copper ore are in operation at Lane Cove, on the Paramatta river. There are large salt works on the banks of the Paramatta river.

Paramatta, being the high road to Windsor and the northern districts, has numerous and commodious inns. It is much frequented by visitors from Sydney. The country in

† *New South Wales*, by a resident of twelve years' experience. 1849.

its immediate vicinity is very pleasing, extensive orangeries thrive luxuriantly, and in many places the land is well cultivated.

The distance between Sydney and Paramatta is about eighteen miles by water, and fifteen by land. Steam-boats run morning and evening between the two towns, and carry a great number of passengers. The trip by water is a delightful one; for, after leaving Sydney, a considerable portion of the interior of Port Jackson is traversed before entering the river, which forms some reaches, whose beauty must be acknowledged even by those who have but just before gazed upon the "harbour of an hundred coves." By land it is much less agreeable, the soil being generally of inferior quality, and the scenery very monotonous, notwithstanding the various dwellings, from the mansion and its spacious pleasure-grounds, to the cottage with its neat garden, and the only too numerous public-houses, which at intervals, on either side, indicate the vicinity of a thriving town. The old-established family of Blaxland have a fine estate on the road between Paramatta and Sydney; and the large mansion and excellent farm of the late D'Arcy Wentworth is on the same line. Farms are also being formed along the Paramatta stream; and a village is springing up on a pretty turn of the river called Kissing Point.

From the portion of Paramatta situated beyond the river, a good road runs for some distance along the right bank of the stream, in a north-west direction, which leads to *Windsor*, the distance being about twenty miles. This town, formerly called the Green Hills, at present containing about 2,000 inhabitants, is situate near the confluence of the South Creek with the Hawkesbury, which at this point is 140 miles distant from the sea, and navigable for vessels of 100 tons burthen, four miles above Windsor. The town is very pleasantly situated, being built on a hill elevated 100 feet above the level of the Hawkesbury, and commanding a beautiful view of the surrounding country; its population and buildings are similar to those of Paramatta. The inns, as is the case, indeed, throughout the colony, are large and excellent; stage-coaches ply every day to and from Sydney *via* Paramatta, and steam-boats thrice a week, the distance between Broken Bay, where the Hawkesbury disembogues into the sea, and the north head of Port Jackson, being about fourteen miles. The land in the vicinity of Windsor

is extremely rich, and being in the possession of numerous small farmers, is carefully tilled, so that frequent farm-yards and extensive fields of grain, with herds of kine, add to the natural beauty of a very picturesque country. In some parts the broad and placid waters of the Hawkesbury are overhung by cliffs 600 feet in height, and the numerous vessels and boats on this noble stream form another attractive feature, and render it a favourite resort.

The town of *Wilberforce* lies on the opposite side of the Hawkesbury, obliquely to the right; and obliquely to the left is—

Richmond, a rising inland town, distant from Sydney thirty-nine miles.

Liverpool is situate on the banks of the George River, which disembogues in Botany Bay. Many persons, long accustomed to the term of "*Botany Bay*," believe that the colony is founded on the shores of this extensive inlet of the ocean. I have already stated, that such was the original intention, but it was never carried into effect; and the shores around Botany Bay are nearly as wild, as bleak, as barren, and almost as uninhabited, as when they were first visited by captain Cook and Sir Joseph Banks. Botany Bay is about fourteen miles to the southward of the Heads, as the entrance of Port Jackson is called; it is wide, open and unsheltered for vessels. I visited it, not liking to leave the country without having seen this famous spot. The only advantage derived from my journey, was the opportunity of contrasting the dreary desolation around its shores, with the busy hum of human industry at the contiguous harbour of Port Jackson, and of being reminded that about half a century ago, there was no difference in the wild waste of nature at either place. The country is flat around, but cleared and cultivated, though the soil is poor; the public buildings are the same as in the towns previously described, with the addition of a Male Orphan School. The Church is a good structure, but insufficient for the wants of the town. The Hospital is a handsome building, well adapted for the benevolent purpose of contributing to the relief of the population for miles around. Three miles beyond Liverpool is Lansdowne bridge, which is built of stone (by convict labour); the arch being of 110 feet span. There are stage-coaches daily between Liverpool and Sydney. It now contains about 5,000 inhabitants, and is yearly increasing in size and opulence.

A new town called *Canterbury* has been commenced, six miles from Sydney, where extensive works have been constructed for refining sugar.

Other towns and villages (see chapter on population), viz.: — *Campbelltown, Appin, Penrith, Pitt-town, Petersham, Narellan, &c.*, are arising in different directions; each with its church, gaol, court-house, market, mill, and numerous spirit and general stores; and as population increases, they will augment in number and in extent. The post-roads throughout the county of Cumberland are numerous, regularly cut and levelled, well made, and kept in good macadamized order, by means of the tolls from turnpikes erected near the entrance of each town. The great thoroughfares have four railed fences at each side of the road, and mile-stones throughout. There are many cross-roads, some still in the original bush state, and known only by notched trees and a cart-rut.

Previous to quitting the county of Cumberland, it may be mentioned, that the road through the *northern* part, towards Wiseman's Ferry, to the Blue Mountains, has been made by following one continuous ridge of sandstone; but the *western* route, by Paramatta, is free from precipitous ravines, and the undulations sufficiently moderate, to admit the passage of a straight road; the soil also is good, consisting chiefly of decomposed trap, and producing crops as abundantly now, as when it was first tilled, forty years ago. In the neighbourhood are the hospitable mansions of the Lawsons, Lethbridges,* and other much respected settlers, who, in the early days of the colony, emigrated to New South Wales, and have contributed materially to the improvement of the land of their adoption.

CAMDEN COUNTY is divided from the county of Cumberland by a line bearing W. 20° W. from Bulli, on the sea-coast, to the head of the Cataract river, thence by that river and the Nepean to its junction with the Wollondilly, there called the Warragamba; on the west by the river Wollondilly to the junction of Uringalla creek, and by the Uringalla and Barber's creek to the Shoalhaven river; on the south by the Shoalhaven river, which separates it from the county of St. Vincent; and on the east by the ocean. The extreme length of Camden county is about sixty-six miles, and the extreme breadth fifty-five miles. Its surface is, in general, a continued succession of hill

and dale, the former sometimes rising into mountains, whose steep sides are clothed with varieties of lofty timber. There is some scenery in this county of a peculiarly wild and gloomy character. A remarkable range, consisting chiefly of trap rock, traverses the whole county, between the Wollondilly and the sea, in a south-east direction, extending from Bulli to a small boat harbour named Kiama; the highest part is known as the Mittagong range. Although so much of this county is mountainous, and a large portion of its area consists of ferruginous sandstone, it yet contains an unusual proportion of excellent grazing land, and also much good wheat land, especially towards the side of the Shoalhaven river. The Razor-back range is another remarkable feature in this part of the country. It is isolated, extending about eight miles, in a general direction, between W.N.W. and E.S.E., being very level on some parts of the summit, and so very narrow in others, while the sides are also so steep, that the name it has obtained is descriptive enough. Around this trap range lies the fertile district of the Cow Pastures, which are said to comprise about 60,000 acres, the greatest part consisting of a light, sandy loam, resting on a substratum of clay. These pastures extend northward from the river Bargo to the junction of the Warragamba and Nepean rivers; they obtained their name from the large number of cattle found there, which had for their original stock three run-aways, belonging to the herd landed from H.M.S. *Sirius*, soon after the founding of the colony. Barragorang, in this county, is a long narrow valley, hemmed in between a continuous ridge and the Blue Mountains, with only one pass into it, and that a very precipitous one. It runs north and south along the banks of the Warragamba, and consists of a stripe of rich soil, matted with the finest native herbage, and most picturesquely variegated with rocky and precipitous mountains, frowningly impending on either side, their rugged declivities occasionally adorned with waving shrubs and verdant heaths. But the most interesting portion of Camden county is the Illawarra, a narrow stripe of arable land, situated between the ocean and the eastern base of a lofty ridge of trap rock, running parallel to the coast, and connected with Mittagong range. The average breadth of this belt of land is from four to six miles, and its length about sixty. This singular region is termed

by the colonists the garden of New South Wales; Mitchell, Lang, Cunningham, Stokes, and other writers, speak in the most enthusiastic terms of its surpassing beauty. The charms peculiar to mountain scenery of the wildest and most romantic order, and those also which characterize more particularly the shores of a mighty ocean, are each enhanced by the rich luxuriance of tropical vegetation, while birds of exquisite form and brilliant plumage take their flight through the clear, exhilarating "Australian" air. The stately palms, the graceful tree-ferns, and the lofty cedars, entwined to their very summits by parasitical plants of various kinds, which, stretching from tree to tree, form a sort of embowered roof, afford a perfect refuge from the sun's too fervid rays, and overshadow a rich and varied undergrowth of wild vines and matted creepers. No pestilential vapour, no deadly miasm lies in wait to poison, with insidious influence, the unwary loiterer. In Eastern Africa (at Zanzibar), Madagascar, and Java, I have looked upon regions (in many respects resembling this) which seemed, at first sight, to realize the idea of Eden; but painful experience soon teaches a European, that to him these fair scenes are fraught with disease and death; and the contemplation of them inspired me with much the same feeling with which a man would regard the mask, whose painted beauty served as a temporary cover to loathsome deformity.

It is difficult to account for the tropical character and extraordinarily luxuriant vegetation of Illawarra. It may be in some degree attributable to the shelter afforded by the adjacent mountains from the cold winter winds, the nourishment obtained from the streams which flow from those heights, and the moist breezes of the sea; but I am inclined to think with Dr. Lang, that the chief cause may be traced in the soil, which exhibits many indications of a volcanic origin. In some parts of the district of Illawarra, or Five Islands, (as it is sometimes called, from some rocky islets which lie near the coast,) there are grassy meadows, of fifty to a hundred acres in extent, quite destitute of timber, and surrounded with a border of the lofty fan-palm, or cabbage-tree. Dr. Lang states, that several extensive tracts are in the hands of non-resident proprietors, a circumstance (he adds) always to be regretted wherever it occurs in the colony; but its resident

inhabitants consist chiefly of small settlers, who cultivate grain, potatoes, pumpkins, &c., for the Sydney market, their produce being conveyed to the capital by water, in small coasting vessels. The cedar-tree, both white and red, abounds in the mountains of this district and in the deep gulleys; and the cutting and conveying to Sydney affords employment to a considerable population, somewhat similar, both in habit and character, to the lumberers of Canada. The cedar of New South Wales is used all over the colony for all sorts of cabinet and joinery work; it is somewhat similar, in appearance, to Honduras mahogany, and the choicer specimens take a fine polish. Its price depends on the number of buildings going on in the colony at any particular time; but it is generally sold at twopence to threepence per superficial foot of one inch in thickness. Illawarra is rendered very difficult of access by the numerous ravines in the range which forms its western boundary, to whose summit, on the interior side, sandstone extends. Half-way down Illawarra mountain (the height of which is estimated by Dr. Lang at from 1,500 to 2,000 feet high, and whose descent to the beautiful Illawarra country is the most precipitous and rugged bridle road, used in the colony for a road), is a singular place of refuge, so capacious as to have received three horses and their riders, formed by a dead tree of immense size, the interior of which has been consumed by fire, although it is still about 100 feet in height.* About nine miles from the foot of the mountain is the thriving little village of *Wollongong*, situated on a small harbour on the coast.

Berrima, the county town of Camden, is eighty miles from Sydney, and is situated in a hollow, on the Berrima river. It is 2,096 feet above the level of the sea, and the climate is sensibly different from that of the low country towards the coast. The gooseberry and currant thrive and attain a good size and flavour on this table-land; while the potato and the apple acquire an European character; but the maize and the orange, which succeed well below, refuse to grow in this higher region. The children also, at Berrima, have fine ruddy faces, as at home; unlike the pale faces of Sydney and the lower country generally. (Lang's *Phillipsland*, p. 238.)

The country immediately round Berrima is of but indifferent quality, though at the

* Lang's *New South Wales*.

distance of a few miles it becomes of a much better description; one chief inducement in the choice of this locality having been its abundant supply of good water, materials for building, and the vicinity of a small agricultural population. The church, court-house, and gaol are handsome buildings; and at the entrance of the township is a substantial bridge of stone-work.

Camden, the estate of the Messrs. Macarthur, is a remarkable place; it extends for many miles along the bank of the Cowpasture river (on the Camden side), and exhibits striking proofs of the enterprising spirit of its proprietors. The best kinds of grape, from the Rhine, Madeira, and other vine-growing countries, have been imported by these gentlemen, who have also brought out several German families, at their own cost, for the purpose of introducing the best mode of cultivating the grape and preparing wine.* These laudable efforts appear likely to prove very successful; and the Messrs. Macarthur will rank, as promoters of production and manufacture in their native land, second only to their worthy father. Their farming is pursued on an excellent system, and is very productive. Silos, or subterranean granaries, have been constructed at Camden; and Mr. Atkinson mentions one (filled with maize and millet) being opened there, after the expiration of six months, and a great part of the grain taken out, which proved to be in a state of perfect preservation, and the straw lining quite sound and dry, except a little near to the under surface of the brick arch.†

Towns not before mentioned.—Wilson, Picton, Kiama, and Murrumbidgee. *Rivers*.—Wingecarribee, a fine freshwater stream, rising in a swamp of that name, and flowing through Berrima, which empties itself into the Wollondilly; the Nattai, which flows into the Wollondilly at Barragorang; the Kangaroo, Avon, Cataract, Bargo, and

Minumurra. *Creeks*.—Myrtle, Werriberri, Wollondoola, Black Bob, Yarringal, Broger's, Broughton's, Mullet, and Wattle. *Eminences*.—Jellorri, Bonnum Peak, Keera Bonnum, Keera, Bullio, Kembla, Nundialla, and Pianeng, several of which command extensive and magnificent prospects.

ARGYLE COUNTY is bounded on the north by the river Guinecor, from its junction with the Wollondilly, to its source near the Burra Burra lagoon on the dividing range; on the west, by the dividing range from Burra Burra, by Cullarin to Lake George, including the three Breadalbane Plains; on the south by the northern margin of Lake George to Kenny's Station; from Lake George to the Alianoyonyiga mountain, by a small gully, descending to the lake; from Alianoyonyiga, by the ridge extending south-east, to the hill of Wollowolar; and from Wollowolar by the Boro creek, to the Shoalhaven river, to the junction of the rivulet from Barber's creek; by the rivulet, from Barber's creek to its source; across a narrow neck of land to the head of the Uringalla creek; by the Uringalla creek to its junction with the Wollondilly river; and by the Wollondilly to the junction of the Guinecor above-mentioned; the nearest point to the sea being distant about twenty-five miles. Argyle is about sixty miles in length, its average being from twenty-five to thirty miles. The surface is generally undulating, consisting of tolerably high and extensive ridges, ramifying in various directions, with swelling hills and irregular plains and vallies between them, watered by the Wollondilly and other branches of the Hawkesbury and Shoalhaven rivers, besides a number of small rivulets and ponds containing water all the year round.

Argyle contains large tracts of open forest, where the basis of the soil is granite, and the country, though pleasing to the eye, from its park-like appearance, is poor, and seldom adapted for cultivation; but the soil is light, dry, and extremely well-suited for sheep-grazing, the surface being covered with a thin but very nutritive herbage. In other parts, however, whinstone predominates, and the land is of the best quality, being equally well fitted for either pastoral or agricultural purposes. Sir Thomas Mitchell speaks of the *anthistiria* or oat-grass, which grows in these tracts, as the best of any Australian grass for cattle, and one of the surest indications of a good soil and dry situation. Argyle is rich in minerals; cop-

* The first cultivators of the vineyard of the Messrs. Macarthur were some piratical Greeks, sent out as convicts, who, at the expiration of their sentences, returned to their own country.

† The construction of silos in those countries (i. e., Hungary, Poland, &c.) where they are in common use, is exceedingly simple. An elevated site is fixed upon (if possible, the pinnacle of a small mount), so that there can be no drainage of water into the granary from higher ground in its vicinity. A pit is there sunk, resembling an inverted lime-kiln; the depth and dimensions of this pit must depend upon the quantity it is required to contain, which may be 200 or 2,000 bushels. (See Atkinson's *Account of Agriculture and Grazing in New South Wales*, p. 75.)

per of the best ore is found near Arthursleigh, and other places. A description of marble is found there, which is said to resemble the famous Giallo Antico, of Italy. Near the Wollondilly, a few miles from Towrang, is a quarry of crystalline variegated marble, which has of late years been wrought to a considerable extent for chimney-pieces, tables, and other ornamental purposes.

Goulbourn, or *Mulwarree*, the county town of Argyle, distant 120 miles from Sydney, is situated in a fine tract of country, fifteen miles in length, with an average breadth of eight miles, called Goulbourn Plains, and is in the centre of an extensive pastoral and agricultural district. Dr. Lang deems it, beyond comparison, the finest town in the interior of New South Wales, and says that the buildings generally are of a much more substantial character, as well as of a much finer appearance, than those of most inland colonial towns. It is a busy and thriving place, and annually increasing in prosperity; the proposed communication by a railway with Sydney, if carried into effect, will add to the importance of the place. There is an extensive flour-mill, with a fourteen horse power steam-engine; a brewery, also carrying a steam-engine; and the inns are stated to be "quite splendid for the interior of a colony." The amount of business done in these establishments is indicated by the fact, that Mr. Bradley, their proprietor, pays £700 a year for carriage between Goulbourn and Sydney. The members of the church of England, Presbyterian, and Roman Catholic persuasions have each a neat temple devoted to their respective forms of worship. The Goulbourn, or Mulwarree Plains are supposed to have been, at no very distant period of time, the bed of a lake; the stones which are collected in particular spots, or which are dug up from excavations made to a great depth, consist of quartz, pebbles, rolled stones, and shingle, as if from the bed of a beach; the ridges at either side are like headlands. The Goulbourn Plains form part of a series of alluvial tracts which traverse the eastern part of the colony, and have an average elevation of about 2,000 feet above the level of the sea; the Goulbourn and Breadalbane Plains are in the south; the Bathurst, in the west; and the Darling Downs, which have a length of 120 miles, with a breadth of thirty to forty miles, are in the north.

The Breadalbane Plains are separated from those of Goulbourn by a ridge of forest land about eight miles across. The plains are situated on the high dividing ground, or waters hid between the waters falling eastward and westward. They have, probably, once been lagoons, of which there are several in the vicinity, viz.—Tarrago, Mutmutbelly, and Wallagorang; the latter is supposed to be the residuum of a lake which probably once covered the Breadalbane plains. In several parts there are what the Americans aptly, but not elegantly, term "salt-licks," on which the cattle depasture with great avidity, and with much benefit. There is a fine tract of pastoral country around these plains, at an elevation of 2,278 feet above the level of the sea. The pasturage has a rich velvet-like appearance. The three open flats or plains are circumscribed by some low hills; they extend for about twelve miles in the direction of the Sydney road, and have an average breadth of two miles.

Lake Bathurst, in this county, about 180 miles south-west of Sydney, and sixty miles inland, from Jervis Bay, is from three to five miles in diameter, and varies in size according to the quantity of water it receives from the torrents on the north-west and south-west—of which it forms the reservoir. The waters are pure—the depth I have not been able to ascertain. Mr. Peter Cunningham speaks of an animal resembling a seal, having been seen in this lake, apparently three feet long, and every now and then appearing above water to "blow." The aborigines call it "Devil-devil," and consider it an evil spirit.

Marulan, the second town in the county, is situated at the junction of the roads leading to Goulbourn and Bungonia, which latter town stands on a creek of the same name.

Rivers.—Wollondilly, Cookbundoon, Shoalhaven, and Guinecor. *Creeks*.—Windellama, Curran, Bangalore, Lerida, Crisps, Mulwarree Ponds, Woorondooronbidge, Kerrowong, Myrtle, and Uringalla. *Eminences*.—Wayo, Mount Fitton, Towrang, Marulan, Mount Macalister, and Mount Hobbes.

ST. VINCENT COUNTY extends along the sea-shore to the southward of Camden county, and includes the harbours of Shoalhaven, Jervis bay, and Bateman bay, already described, and is the general coast line of the colony. It is bounded on the north and west, by the Shoalhaven river; and on the south, by Moodong creek, Deua river, and Moruya river. Its length is about eighty-four miles,

and its breadth about forty miles. The greater, and especially the northern portion of this county, is very wild and mountainous; and will probably afford a rich field for geological and mineralogical research.* The southern portion affords the most soil available for cultivation or pasture; although, on Bateman bay, which is its limit on the south, much good soil cannot be expected, as Snapper Island, at the entrance, consists of grey compact quartz only, with white veins of crystalline quartz. On the upper part of the Shoalhaven river, there are many plains admirably adapted for agricultural purposes, the river there resembling an English stream, and flowing nearly on a level with the surface. The county is well watered by several small streams, of which the most considerable, called the Clyde, runs nearly parallel to the sea for a considerable distance.

Towns.—Braidwood is the chief; the others are Huskisson, Ulladulla, Broulee, Marlow, Narriga, Tianjara, and Farnham. *Rivers.*—Shoalhaven, Macleay, Clyde, Deuca, Mongarloo, Mornya, and Crookhaven. *Creeks.*—Wandagandria, Jervis, Yerrimong, Pigeon-house, Endrick, Jembaic m-bene, Congola, and Groobyar. *Eminences.*—Pigeon-house, Currockbilly, Budawang, Womballoway, and Jillamatong.

South and south-west of St. Vincent county there has been recently marked out the counties of Dampier, Beresford, Auckland, Wellealey, Wallace, Cowley, and Buccleuch; but of the boundaries and characteristics of these counties we have as yet little precise information, excepting Auckland, which is described by Mr. Wells† as comprehending that portion of New South Wales, bounded by a line running from Cape Howe along the boundary of the district of Port Phillip, to the point where the said boundary crosses the 149th degree of E. long.; thence due north along the said 149th degree of E. long. to the lat. of 36° 40' S.; thence due east to the sea, and thence south along the sea coast to Cape Howe. It is about sixty miles in length, and forty in breadth. It contains the secure

haven of Twofold bay, on the south shore of which is situated the rising settlement of Boydtown. This thriving township owes its establishment chiefly to Mr. Benjamin Boyd, one of the most enterprising colonists in Australia, who, with his brother, Mark Boyd, of London, has very materially contributed to advance the interests of the colony, and to popularize New South Wales in England. There are two townships, named East Boyd and Eden, separated from each other by the river Kiah or Towamba. Point Brierly, about one mile from each township, is in 37° 6' 40" S., 149° 57' 42" east of Greenwich. Twofold bay is the chief port of outlet for the south-east districts of New South Wales, and is the key to the extensive Maneroo country, now divided into the several counties above named. Lieutenant Woore, R.N., who made the survey for the Admiralty chart, says that South bay, or that on the shores of which East Boyd stands, has a decided superiority over any other anchorage in Twofold bay, arising from the prevailing and strong winds blowing from the southward. It is more extensive than North bay, where Eden is, and possesses abundance of fresh water, which gives it a further advantage.

Boydtown, under the zealous exertions of its founder, already contains a neat Gothic church, the spire of which is visible twenty miles at sea, a handsome hotel, in the Elizabethan style, ranges of commodious brick stores, well-built houses, and neat verandah cottages; a jetty of several hundred feet in length, and a heaving-down hulk. There is an excellent whaling station, also extensive boiling-down and salt-provision establishments, &c. A light-house, now erecting on the South head, at the entrance of the bay, consists of a tower seventy-six feet in height, with a diameter of twenty-two feet. It is being built of white Sydney sandstone, in solid blocks of nearly half a ton each, and, independent of its light, will prove an excellent land-mark for the shipping which frequently take shelter in the bay, where they can procure, at East Boyd, abundance of provisions, fuel, and water. The produce exported already amounts, in value, to nearly £100,000 a-year. Mr. Benjamin Boyd has, after considerable labour, and at his own cost, constructed a road of forty-five miles, to convey the produce to Boydtown, from the famous squatting district known as the Maneroo plains, or Brisbane downs. The fine sheep-walks of

* My own opinion is, that gold will eventually be found there.

† *Geographical Dictionary or Gazetteer of the Australian Colonies.* By W. H. Wells. Sydney, 1848. This useful work, which I have but just procured, appears an admirable compilation of facts, collected with great care, and which, judging from the difficulty I have experienced in obtaining correct local information, must have been greatly needed.

Maneroo, which occupy a square of about 100 miles in extent, and are from 2,000 to 3,000 feet above the level of the sea, on the right bank of the river Murrumbidgee, lie to the eastward of the meridian of 149° , and extend upwards of forty miles to the southward of the parallel of $36^{\circ} 15'$, which appears to be the parallel of their northern skirts. They are bounded on the east by the coast-range of hills, which give an interior or westerly direction to the streams by which these downs are permanently watered; and on the west by the Australian Alps, known here as the Warragong chain.

Towns in Auckland county.—Boyd, Eden, Pambula. *Rivers.*—Towamba or Kiah, the Towaca, Merumbal, Bega, Bomballa, and Bemboka. *Eminences.*—The Wanderer's range, and Mount Imlay, so named, after Dr. Imlay, who first explored the adjacent country. This eminence is an excellent landmark, being about 3,000 feet above the level of the sea. These natural savannahs consist of a series of undulations of hill and dale, lightly timbered, with a rich soil, and well watered by the Deuna, Shoalhaven, Queanbeyan, Murray, Murrumbidgee, and Mitta-Mitta rivers, are a very favourite residence for squatters, and are capable of yielding support to many thousand inhabitants.

MURRAY COUNTY is bounded on the north-east by the Boro creek, from its junction with the Shoalhaven river to its source in the hill of Wollowalar; by the range thence to the Aliano-yonyiga mountain, between Lake George and Lake Bathurst, and by a watercourse descending from that mountain to Lake George, by the northern shore of Lake George to the hill on the dividing range, by the range in the west overlooking its northern extremity, and thence by Gandaroo creek and Yass river to the Murrumbidgee; on the west, by the Murrumbidgee river to the junction of Miccaligo creek; on the south, by that creek to the Twins or Tindery Pics, passing between them to the source of Tindery creek, and by that creek to Queanbeyan river, by that river to the creek entering it from the hill called Tumanwong, and by a line from the source of Jerrabatgulla, in that mountain, to the junction of Currabeene creek with the Shoalhaven river, and on the east, by Shoalhaven river to the junction of Boro creek.

The length of this county is about seventy-eight miles; its breadth about forty-four miles. It contains several extensive tracts

of remarkable fertility, instances of which have been quoted in the description of the general character of the soil of New South Wales; and the oat-grass, before mentioned as growing spontaneously in Argyle, is also found here. A ridge of high land runs north and south through the eastern portion, in a somewhat parallel direction with the Shoalhaven river, which divides the county of Murray from that of St. Vincent. The most remarkable feature in this county is Lake George, which is stated by Sir Thomas Mitchell to have been in 1828 a sheet of water seventeen miles in length, and seven in breadth, the water being slightly brackish, but very good for use. The lake was then surrounded by dead trees (eucalypti) of about two feet in diameter, which also extended into it until wholly covered by water. It contained no fish; and an old native female said she remembered when the whole was a forest, a statement supported *pro tanto* by the dead trees in its bed. In 1836, Sir Thomas found the whole expanse covered with grass, and not unlike Breadalbane Plains. The site of Lake George, as also that of Lake Bathurst, in the adjoining county, is now under cultivation. The southern side of this *ci-devant* lake presents one continuous low ridge, separating its former bed from the head of the Yass river. According to Count Strzelecki, fragments of trees imperfectly fossilized have been discovered in this vicinity.

Towns.—Queanbeyan, situated on the Queanbeyan river; Bungendore, Yass, and Larbert. *Rivers.*—Yass, Jingery, and Molongo. *Creeks.*—Morumbateman, Gundaroo, Jerrabomberra, Jinglemony, Croonmieri, Modbury, Torallo, Majura, and Batmaroo. *Elevations.*—Mount Ainslie, Bywong, Gourock Pic, the Twins, Cockatoo Hill, Balcombe Hill, and One Tree Hill.

KING COUNTY is bounded on the east by the dividing range forming the western boundary of the county of Argyle from the head of the Crookwell river, in $34^{\circ} 30'$ S. lat., to the head of the Gundaroo creek, near Lake George; on the south by Gundaroo creek and the river Yass to the junction of Derringullen creek near Bowning hill; on the west by the range of Bowning hill to the head of Boorawa river, and by that river to its junction with the Lachlan; on the north-east by the rivers Lachlan and the Crookwell to its source, as before mentioned. Its length is seventy-six miles, its breadth forty-three miles. The Cullarin range runs

from north to south, dividing this county from that of Argyle. The county town, at present represented by the thriving little village of Gunning, is situated in a fine flat of considerable extent, very suitable for growing wheat, barley, oats, potatoes, and fruit of the British varieties. It is surrounded by a fine tract of grazing country. Gunning is 152 miles from Sydney, and nearly midway between Goulbourn and Yass, being distant from each about twenty-eight miles. The latter town, though of no great extent, (containing about sixty houses,) comprises a portion of two counties, being built on each side of the river Yass, which separates the county of King from that of Argyle. Yass plains or downs are also divided by this stream, whose bed (according to Dr. Lang) is 1,311 feet above the level of the sea. These tracts consist of fine grassy hills, thinly covered with wood, and fertile vales clear of timber. Mr. James says, "there appears no limit to the rich feed for sheep." The country is covered with flocks and herds. Proceeding from Gunning towards Yass plains there is a rapid descent from the higher level of the surrounding country. Dr. Lang estimates this descent at 800 to 1,000 feet. Near Yass, on the Sydney side of the river, is situated the well-built cottages and extensive gardens of Henry and Cornelius O'Brien, and of Hamilton Hume, J.P. Mr. H. O'Brien's grounds are very tastefully laid out. His numerous flocks and herds roam over an "hundred grassy hills," the progeny of a few sheep and cattle with which he sat himself down in the wilderness about twenty years ago. Civilization has now reached and surrounded him. Like the Antediluvian patriarch Jabel, Mr. O'Brien is considered "the father of such as dwell in tents," alias *bark huts*, and of such as have cattle and sheep beyond the boundaries of the colony, i.e. *squatters*. As stated under the head of commerce, Mr. O'Brien, finding the value of his stock woefully reduced by the panic in 1843, commenced the "boiling down" system, and converted his unsaleable live stock into the valuable export of tallow for the English markets.

Rivers.—Yass, Narrawa, Lachlan, Boorowa, Weeho, and Crookwell. *Creeks.*—Hovell's, Cullaba, Broman, Pudman, Derringullen, Bango, Gundaroo, Jarrawa, Dimond, Lambton, and Cartwright. *Eminences.*—Mount Darling, Mundoonen, Chaton, Dixon, and Narrawa.

GEORGIANA COUNTY is bounded on the east by the dividing range extending from the head of the Crookwell in 34° 30' S. lat., by Burra-Burra lake and Mount Werong, to the head of Campbell's river; on the north by Campbell's river to Pepper creek; on the west by Pepper creek and the range extending from its head toward the source of Rocky Bridge creek, and by that creek and the Abercrombie to the river Lachlan; on the south by the Lachlan and the Crookwell to its source as aforesaid. The length of this county is about fifty miles, and its breadth forty. The surface is irregular and varied, and in general well adapted for grazing, but only occasional patches on the banks of rivers and streams afford much promise of successful agriculture.

Towns.—Not any. The chief place is Bingham. *Rivers.*—The Abercrombie which rises in a mountain about three miles east of Mount Murrum, and after a course of about ninety miles, falls into the Lachlan; the Campbell, Isabella, Crookwell, and Bolong. *Creeks.*—Rocky Bridge, Tuena, Kangaroo, Glengarry, Mulgowrie, Julong, Kangaloolah, Phils, Copperhaunia, Muligonna, Carrawa, and Peppers. *Eminences.*—Werong and Mount Lawson.

WESTMORELAND COUNTY is bounded on the north-east by Cox's river from its junction with the Wollondilly to the small creek entering the Cox from the west, one mile south of the new road to Bathurst; on the north by that creek and one descending to Solitary creek, near its junction with Antonio's creek, and thence by the Fish river to Campbell's river; on the west by Campbell's river to its source in the dividing range, and by the dividing range of Burra Burra lagoon; on the south by the river Guinecor from Burra-Burra lagoon, to its junction with the Wollondilly; on the east by the Wollondilly to the junction of Cox's river above-mentioned. Length, sixty-four miles; breadth, thirty-two miles. Westmoreland is the most mountainous of the counties of New South Wales, and although the elevations are not of great height, seldom exceeding three to four thousand feet, they are numerous and generally barren. One portion of the Blue Mountains, two miles to the north of Swashfield, is 4,000 feet above the sea. The head of the Fish river four miles E.S.E. from Mobrin, is 3,472 feet; Mobrin is 3,275 feet; a hill near Bunbingle's creek is 3,554 feet; and one in Snake's valley is 3,576 feet

Mounts Collong and Murrumbidgee are remarkable peaks. There are, however, some fertile spots and excellent grazing districts in Westmoreland. The Emu valley, ninety-nine miles from Sydney on the road to Bathurst, is an extensive morass. O'Connell town, near the Fish river, on the borders of Westmoreland and Roxburgh, in O'Connell plains, 115 miles from Sydney, is the chief station in the colony.

Rivers.—Cox, Campbell, Wollondilly, Fish, Kowmung, and Guinecor. **Creeks.**—Jouriland, Tonatti, Lacy, Antonio's, Lowther, King, Wiseman, Native-dog, Fish river, and Stony.

BATHURST COUNTY is bounded on the north-east by the Campbell river, from Pepper creek, and by the Macquarie river to the junction of Lewis's ponds; on the west, by Lewis's ponds creek to Blackman's swamp, and thence to the Canobolas mountains; thence by the Panuara range, and rivulet of the same name, to the Belubula stream, and by that stream to its junction with the Lachlan river; on the south, by the Lachlan river to the Abercrombie and the junction of the Rockybridge creek, also by that creek and the range to the head of the Pepper creek, and by the creek to the river Campbell, as first mentioned. The county is in length sixty-five miles, in breadth forty miles. This transalpine country was considered inaccessible until 1813. It consists in general of broken table land, in some places forming extensive downs, without a tree, such as Bathurst plains, which include 50,000 acres, and are about nineteen miles in length, and of a breadth varying from four to eight miles, undulating, and with the Macquarie river meandering throughout their greater length, occasionally ornamented with fringes of swamp oak. These plains are 2,100 feet above the level of the sea; they are not unlike the Brighton downs, but with this remarkable peculiarity, that on the summits of some of the elevations, or knolls, are found dangerous quagmires, or bogs, resembling sometimes the dry bed of a pond, but at other times concealed by rich verdure. "Fairy rings" are frequent, and on most of them grow fungi of a large size. With the exception of small portions of land in particular localities, allotted to veteran soldiers and emancipists, the county is parcelled out into large farms of 2,000 acres each; the proprietors being free emigrants of a very superior class. Bathurst county is one of the most flourishing districts in

the colony; its society excellent; its resources, as a fine-woolled sheep farming district, considerable; and so salubrious is the climate that the first natural death did not occur until 1826, *twelve years* after its settlement. Bathurst town, on the banks of the Macquarie river, is in 33° 24' 30" S. lat., and 149° 29' 30" E. long., twenty-seven miles and a half north of Government-house, Sydney, and ninety-four and a half W., bearing W. 18° 20' N., eighty-three geographical or ninety-five and a half statute miles, and by the road distant 121 miles. The town is flourishing, and has its literary institution, &c.

This county in particular presents remarkable instances of a singular phenomenon observable in various parts of Australia, namely, what would be viewed in a long civilized country as the most striking evidences of former cultivation, the land being laid out in ridges apparently marked by the plough, and with a regularity of intervals which would secure a prize from a Scottish agricultural society. These plough ridges occur always on gentle declivities, where there is a tenacious subsoil with loose superstrata, and are doubtless produced by the action of water; as there are found, even on the tops of mountain ridges, extensive beds of water-sand and water-gravel, mixed with fragments of shells, presenting the identical appearances observed on the banks of rivers, or upon sea-beaches; but still the *regularity* of the distances in the plough ridges is unaccountable.

Excellent limestone is found in the vicinity of Bathurst town.

Mr. W. H. Wells, the able compiler of the *Geographical Gazetteer of the Australian Colonies*, describes a "magnificent" natural tunnel or archway, discovered by Mr. Davidson not long since, forty-five miles west of Bathurst town, on the Grove creek, about four miles above the confluence of that stream with the Abercrombie, and seven miles from Mulgunia. The tunnel is, in length, about 300 paces; the north entrance is seventy feet broad and fifty feet high; towards the centre the breadth increases to ninety feet, and the elevation to 100 feet; at the southern extremity it is about 100 feet broad, and seventy to eighty feet high; the whole direction not exactly straight. The roof is thickly covered with stalactites of different colours, some hanging down to a length of twenty feet. The sides of the tunnel, especially on the left hand, have the

appearance of galleries raised one over the other, supported by apparent carved work and ornamental pillars, the whole adorned by splendid stalagmites of various forms. Other caverns of great extent, but not yet fully explored, branch out of the main tunnel; one of them contains two massive stalagmites, resembling a pulpit and a tomb. The descent to the tunnel is through a very narrow defile, through which a creek flows direct through the main chamber of the cave.

Towns.—Bathurst, before mentioned, and Carcoar, 144 miles from Sydney, on the Belubulu river. *Rivers.*—Macquarie, Campbell, Belubulu, Abercrombie, and Lachlan. *Creeks.*—Rockybridge, Frederick's valley, Emu swamp, Peppers, Queen, and Princess Charlotte's vale; Foster ditto, Swallow, Coombul, Coombling, Lewis ponds, Cadiangullong, Muramer, Mundoraman ponds, Milburn, Grubbenburn, Muringulla, Limestone Wangola, and Panuara. *Plains.*—Bathurst, Warwick, King's, Dunn's, and Pretty plains. *Eminences.*—Canobolas, and the Three Brothers.

WELLINGTON COUNTY, north-west of Bathurst, is bounded on the north-east by the river Cudgegong; on the north-west by that river and the Macquarie, to the junction of the river Bell, near Wellington valley; on the west by the rivers Bell, Molong, and Bore-nore creek, to the Canobolas mountains; on the east by this range, and thence to Blackman's swamp, and by Lewis ponds, the Macquarie, Turon river, Cunningham's creek, and Cudgegong creek, under Bocobel, to the Cudgegong river. It is, in length, seventy-two miles, and in breadth forty-two miles. This county is famed for a beautiful and fertile valley, (Wellington valley), situated at the junction of the Bell and Macquarie rivers, distant 238 miles from Sydney, and 117 from Bathurst. The scenery is very charming, and the soil richly productive. In this county, as stated at pages 398-9, Sir T. Mitchell discovered some remarkable caves in the side of a low hill, sixty-five feet above the adjacent alluvial flat of Wellington valley. The entrance consists of two crevices, between large blocks of limestone, in one side of a hollow about twelve feet deep, and which has evidently been widened by water. One of the caves, at 180 feet from its mouth, has a height of sixty feet, and a breadth of twenty-five feet: the floor consists of reddish earth. A gigantic stalactite, at the lower end of the

cavern, gives somewhat the appearance of a vast Hindoo idol. Some of the caves have not been fully explored. The osseous remains found in these caves are very remarkable; some of the fossilized bones are supposed, by Professor Owen, to have belonged to a very large species of the kangaroo tribe, which is now extinct. Mudjee, the chief town of the county, is pleasingly situated on the Cudgegong river. Another township, called Neurea, has been laid out.

Rivers.—The Macquarie, (which runs through the county), the Cudgegong, Bell, Molong, and Turon. *Creeks.*—Cunningham, Meroo, Pyramul, Nubrygin, M'Donald, Piambong, Merrenda, and Warradugga. *Eminences.*—Two ridges of mountains run from east to west, of which the most prominent elevations are Corcalgong, Bocobel, Boiga, and Yammin.

ROXBURGH COUNTY, north of Bathurst and Westmoreland counties, is bounded on the north by the Cudgegong river from the Mount Durambang, by Canguddy creek, to the junction of Cudgegong creek, on the east of Mount Bocobel; on the west by that creek, by Cunningham's creek, and by the Turon river to the Macquarie river, which latter, along with the Fish river, to the junction of Solitary creek, forms the southern boundary; on the east by Solitary creek to Honeysuckle hill, and thence by the dividing range to the head of Cook's creek, and by the creek and the Cudgegong river and Umbiella creek, to Mount Durambang. Length, fifty miles; breadth, forty miles. The county is very hilly, but has rich pasturage, some fertile spots, and is well watered. *Chief town*—Kelso, on the Macquarie river, 112 miles from Sydney.

Rivers.—Macquarie, Cudgegong, Fish, Turon, and Capertee. *Creeks.*—Warra-gunnie, Tabraboucha, Umbiella, Cook's, Coolamigel, Roundswamp, Antonios, Solitary, Jabez-Jabeck, Winburdale, Cunningham's, and Mallamurra. *Eminences.*—Tayan Pic, which is visible from the Wollombi hills, in Northumberland, distant forty miles, and also from the Honeysuckle hill, on the Bathurst road, forty miles distant: hence this elevation became a well-known point in the trigonometrical survey by Sir Thomas Mitchell, of the settled districts in New South Wales. The other eminences are Mounts Rankin, Ovens, Clاندulla, or Marsden.

COOK COUNTY, adjoining Cumberland, is bounded on the north-east by the Colo

river, which is also called the second or lower branch of the Hawkesbury; on the north by the rocky dividing range, extending east and west, between the rivers Hunter and Hawkesbury, and forming the south boundary of the county of Hunter; on the west by the range dividing the waters to Honeysuckle hill; and hence to where the Mount Blaxland road crosses Cox's river; on the south-west by Cox's river; on the east by the Warragamba, Nepean, and Hawkesbury, to the junction of the lower branch, as above mentioned; it is in length sixty miles, and in breadth forty-four miles. A great part of Cook county is occupied by the Blue Mountain range, across which the fine road from Sydney to Bathurst lies. Table land, from 2,000 to 3,000 feet high, abounding in picturesque scenery, occupies a considerable portion of the county. Emu plains, and several fertile valleys, compensate, in some measure, for the large quantity of rocky soil in this county. At King's table land (2,727 feet above the sea) the view is magnificent; for eighteen miles from the commencement of the ascent of the Blue mountains at Emu plains, the slope is gradual; from thence to the twenty-sixth mile is a succession of steep and rugged hills, some almost so abrupt as to deny a passage across them to King's Table Land, on the south-west of which the mountain terminates in lofty precipices, at whose base is seen the beautiful Prince Regent's glen, about twenty-four miles in length. From Mount York (3,292 feet high) the view is magnificent—mountains rising beyond mountains, clothed with impenetrable forests, with stupendous masses of rock, forming buttresses, in the foreground. The Vale of Clywd, so called from its resemblance to a vale of the same name in North Wales, Britain, is 2,496 feet above the sea, and runs along the foot of Mount York, 796 feet below the summit of the mountain, extending six miles in a westerly direction. The soil is rich, and the scenery very beautiful. In the valley, near the inn called the *Weather-boarded Hut*, on the road to Bathurst, there is a line of perpendicular cliffs, of immense height, which has a small cataract termed *the Falls*. At the point where the rivulet leaps over the precipice, the cliffs recede considerably, forming, according to Lang, two bold headlands of fearful elevation, and enclosing a basin of prodigious depth, in which the tops of lofty trees are seen several hundred feet below the preci-

pice. When the rivulet is flooded, the scene is magnificent; in other seasons, the waters are separated into distinct atoms, and are precipitated to the bottom like innumerable particles of frozen snow. The great western road from Sydney to Bathurst, over Mount Victoria, was originally very imperfect and steep. According to the design of the surveyor-general, Mitchell, in 1827-8, recommended by a road commission in 1829, a new line over the Blue mountains was commenced in 1830, and three gangs of convicts, consisting of 250 prisoners, under colonial or secondary sentences, with ankle fetters of seven to ten pounds each, were located near the intended road, in a stockade prepared for the purpose, with huts around for a guard of soldiers. The dense forest that covered the projected road was first cleared and burned, chasms were filled by immense masses of blasted rock; and walls of extraordinary thickness, and of a height of fifty to eighty feet, connected one precipice with another, and preserved a continuous or gradual scale of declivity; a defile was cut through the solid rock, of twenty to thirty feet deep; and finally, in 1832, the *Victoria Pass* was opened to the public, in due form, by the governor, Sir R. Bourke.

Towns.—Hartley, seventy-eight miles from Sydney, the chief town, is built on the west bank of the river Lett; the other towns are Emu, Wilberforce, Bowenfels, Rydal, and Colo. Emu township, thirty-five miles from Sydney, is laid out on the rising ground of Emu plains, behind the government farm, on the banks of the Nepean. The seat of *Edenglassie*, (called by Sir Francis Forbes, the late chief justice of New South Wales, after the family seat in Aberdeenshire, North Britain, of the lamented Sir Charles Forbes, Bart.,) is about two miles up the river, on a fine reach, capable, says Mr. Wells, of "floating a dozen men-of-war." *Rivers.*—Grose, Colo, Cox, Nepean, Hawkesbury, Lett, and Warragamba. *Creeks.*—Wheeny, Meroo, Billong, Currency, Wollinganby, Bowen, Wolgan, Farmer, and Cook. *Eminences.*—the Blue mountains, Honeysuckle hill, Mounts Walker, Clarence, Victoria, Tomah, King George, and Hay.

NORTHUMBERLAND COUNTY, which intervenes between Hunter county and the sea, is one of the finest in the colony; it is bounded on the north by the river Hunter, and on the south by the Hawkesbury, to the sea-coast, which forms the eastern

boundary; and on the west by Wollombi brook, the junction of Parson's creek, by that creek to its head in the range dividing the waters of the Hawkesbury from those of the Hunter, by Warring creek, to its junction with the Macdonald river, or lower branch of the Hawkesbury, and by the said lower branch to its junction with that river. The length is sixty-one miles, breadth fifty. There are some fine elevations, commanding extensive prospects; but the general aspect is a series of undulations and elevated plains, intersected by numerous creeks, streams, and rivulets. The river Hunter affords a means of water communication throughout its northern boundary, and along its alluvial banks, some of the most flourishing farms and estates in the colony are situate. Yarramalong is a beautiful vale, distant twenty miles from Brisbane water, and watered by the Jiliby-Jiliby creek. Lake Macquarie, or Awaba, twelve miles south of Newcastle, is the largest lake in New South Wales, and famed for the beauty of the surrounding scenery. The entrance is at the head of "Reid's Mistake," distant 105 miles from Sydney. Newcastle (native name Mulubinha), in 32° 55' 50" S., about eighty miles from Port Jackson, is the maritime town of the county, and fast rising into eminence, not less by reason of its position at the commencement of the navigation of the Hunter, than from the locality of the coal mines, now actively worked by the Australian Agricultural company. Maitland, on the Hunter river, at its junction with Wallis creek, 127 miles from Sydney, and twenty-five miles from Newcastle, is the seat of the county executive, and a neat and flourishing settlement. The town is divided into East and West Maitland, built on each side of Wallis creek. There is a spacious court-house, a large gaol, several church of England, Presbyterian, Wesleyan, and Roman catholic temples of worship. The Roman catholic chapel is a handsome structure. East Maitland is better supplied with water than West Maitland. Coal, of excellent quality, is worked on both sides of Wallis creek, and delivered to the consumer at six shillings per ton.

Morpeth, originally called the Green hills, is a rising town, picturesquely situated at the head of the navigable part of the Hunter river, twenty-nine miles by water from Newcastle. It contained, in 1848, a church and parsonage, a Wesleyan chapel, a ladies' school, and two day schools; five inns, a steam flour-mill, soap and candle manufac-

tory, some excellent shops, thirty-seven stone and brick buildings, and 117 wooden tenements. The extensive wharf and stores of the Hunter River Steam Navigation Company are at Morpeth, and throughout the greater part of the year there is a daily steam-packet communication with Sydney, with which also there is a considerable trade in sailing vessels. About two acres on the bank of the Hunter river are used as a government wharf. Good coal is found in the vicinity. Morpeth, like Boyd, and other towns in New South Wales, is built on land belonging to private individuals, who naturally seek to improve the value of their property by promoting the formation of towns in eligible places.

The extraordinary progress of the colony of New South Wales is evidenced in the manufacturing industry evinced in many of the towns. In Maitland, for instance, we are told, that—

"Porter and ale of excellent quality are now brewed there. The Irrawang pottery is so good, that the demand greatly exceeds what can be produced, from the paucity of good workmen. Tweed is improved so much, that it sells in Sydney to such an extent that the district market is often very inadequately supplied, though two establishments are in active operation. The tobacco manufactured in Maitland and the district is nearly all sold in Sydney, and the demand for it is gradually increasing. The growth of the vine is greatly extending, though but little wine has been yet brought into market; manifest improvement is however visible in what is brought forward. Leather and soap are produced to a great extent, and of excellent quality. Iron, salt, and a variety of other articles, are rapidly improving."

The *Maitland Mercury*, published bi-weekly, is an excellent provincial newspaper.

Towns.—Newcastle, Maitland, Singleton, Morpeth, Wollombi, Hexham, East and West Gosford, and St. Alban's. *Lakes*.—Macquarie, Brisbane Water, Tuggerah Beach, and Wamberall.

HUNTER COUNTY, north of Cook county, and separated from the sea by Northumberland county, is bounded on the north by the river Hunter, and also by the Goulbourn to the junction of Widdin creek; on the west, by Widdin creek to the Coricudgy mountain, by the range thence to the Durambang hill; on the south, by the Colo river to the Hawkesbury river; on the east, by the Hawkesbury to the north of the Macdonald river, or lower branch; and on the north-east, by the Macdonald river to the junction of Wareng creek, and by Wareng and Parson's creeks, and the Wollombi creek, to its junction with the Hunter river. Length,

from north to south, seventy-one miles; breadth, east to west, forty-seven miles.

The aspect is mountainous, and occasionally very wild. The chief town, called after the plains in which it is situated, Jerry's, is on the Hunter river, 122 miles from Sydney.

Rivers.—Hunter, Goulbourn, Macdonald, Wollombi, and Colo. *Creeks.*—Webb's, Parson's, Wollum, Putty, Widdin, James, King, Greig, and Doyle. *Eminences.*—Nullo, Coricudgy, Monundilla, and Wambo.

PHILLIP COUNTY is bounded on the north by the river Goulbourn, from its source, near the head of Wialdrar creek, to the junction of Widdin creek; on the north-west, by the Cudgegong river, from its source, at Mount Durambang, to Wialdrar creek. Its length is fifty-three miles, and its breadth forty-one miles. Rytstone is the chief place.

Rivers.—Goulbourn, and the Cudgegong. *Creeks.*—Widdin, Cooyal, Pipeclay, Lawson, Moorlarben, Wilpingong, Bylong, Barrigan, and Wollar. *Eminences.*—Pomary, Runker's Peak, Cox's Crown, and Mount Penny; but these are only hills of inconsiderable height.

BLIGH COUNTY, bounded on the north by the Liverpool range from Mount Mac Arthur to the head of Coolaburragundy river, by this and the Talbragar river to the junction of a small creek two miles east of Balara; on the west by a connected ridge extending from the head of the creek aforesaid to a hill five miles north of the junction of the Bell with the Macquarie river, and thence by a line south to the Macquarie; on the south-west by the Macquarie to the junction of the Cudgegong river, and on the south-east by the Cudgegong river; and Wialdrar creek, to the source of the latter in the dividing range at the head of the Goulbourn river, thence by the Goulbourn and Krui river to Mount Mac Arthur or Liverpool range. Length, about eighty miles; breadth, forty miles. There are several rich plains, viz., Harrison's, Krui, Nandoura, and Wellington valley; the most prominent mountains are Mooa, East Bluff, Pandora's Pass, and Gobalion. Ailsa, on the Krui river, is the county town; the others are Dalkeith and Montefiores.

Rivers.—Macquarie, Goulbourn, Talbragar, Erskine, Krui, and Cudgegong. *Creeks.*—Coolaburragundy, Teeree, Four Mile, Cookabulgo, Munmurra, Peters, Derrinderry, Stony, Krui, Moons, and Wildra.

BRISBANE COUNTY is bounded on the north-east by Hunter river, from its source in lat. $31^{\circ} 46'$, to the Goulbourn river, and

thence to the Krui river; on the west by the Krui river to its source at Mount Mac Arthur or Moan in the Liverpool range; on the north-west by the Tinagroo and Temi mountains to the head of the Hunter river. Length, ninety miles; breadth, forty miles. The aspect of the county consists of several ranges of table-land, with occasional plains and peaks; one, Mount Wingen, or the Burning Mountain, in $31^{\circ} 54'$ S. lat, and $150^{\circ} 56'$ E. long., described in the Geological section, has an elevation of 1,500 feet above the sea.

Towns.—Murrurundi, chief, on Page's river; Haydonton, Scone, Merriwa, Cassilis, Invermein, and St. Aubin's. *Rivers.*—Goulbourn, Hunter, Page, Isis, Krui, and Werrenul. *Creeks.*—Krui, Moon, Coulson's, Bow, Gummum, Hall, Giant, Way-bong, Dartbrook, and Kingdon. *Plains.*—Bow, Krui, Gummum or Gammon Plains, 150 miles from Sydney. *Eminences.*—Mount Tinagroo, Tereil, Murulla, Oxley's peak, and Tomarra.

DURHAM COUNTY is bounded on the east by the Williams river to its source, and thence by the Mount Royal range to the head of one of the branches of the Hunter river in lat. $31^{\circ} 46'$; and by that river on the west and south to the junction of William's river above-mentioned. Length, sixty miles; breadth, fifty miles. Fertile and well watered. The fine district of Patrick's plains includes the middle portion of Durham county, the north-east portion of Hunter county, and the north-west portion of Northumberland county. Paterson, the county town, is situated on the river of the same name, distant 130 miles from Sydney. Other towns—Muswellbrook, Seaham, Clarencetown, Dungog, Hinton, Gresford, Merton, and Camberwell.

Rivers.—Hunter, Williams, Patterson, Allyn, and Bouchell. *Creeks.*—Stewartsbrook, Sandy, Muswell, Saltwater, Fay, Fall, Carrow, West, Glendon, Myall, and Lambvalley. *Eminences.*—Mounts Royal, Wollen, M'Arthur, Drying, and Tangorin.

Dungog, one of the towns or villages in Durham county, is noted for its position and prosperity. It is situated on the banks of William's river, a considerable way below the Chichester river, both of which streams are famed for their clearness and purity. The village covers a succession of ridges which are said to "fall into one another like the fingers of clasped hands." These ridges are thinly wooded, and government has preserved

ample space for promenade and circular pleasure-grounds near the beautiful reaches and bends of the river. There is a church, two schools, two large inns, a steam flour-mill, court-house, horse-barrack, horse-breaking and training stables, boiling-down establishments, several good dwelling-houses and neat farms in the vicinity; a cheerful peal of church bells, and a band of rustic musicians. "From one end of the town," says Mr. Wells, "to the other, the voice of children and the hum of industry fall upon the ear." The country around is wildly picturesque.

GLOUCESTER COUNTY, bounded on the west by the Hunter river, on the south-west by William's river to its source, and thence by the Mount Royal range bounding the county of Durham to the principal source of the Manning river; on the north by the Manning river to Farquhar inlet, south-east by the sea-coast. Length, eighty miles; breadth, sixty-five miles. The northern parts of the county are mountainous, but there is much good land both for grazing and agricultural purposes. At the entrance of Port Hunter or Newcastle bay, there is a small but rather lofty island, called Nobby's Island, somewhat resembling the Craig of Ailsa, or the Bass Rock on the coasts of Scotland, apparently composed of indurated clay supporting a stratum of sandstone, over which there is a stratum of coal, the clay appearing to rest on a substratum of silicious substance. The indurated clay consists of thin laminae, into which it may be easily separated with a knife, and which present innumerable impressions of vegetables. Dr. Lang says—"I have seen such impressions in specimens of the clay obtained at a height of fifty to a hundred feet above the level of the sea. It appears indeed to consist of nothing else but masses of vegetable matter, which, at some former period in the history of the earth, must have floated in a solution of clay. Nobby's island has evidently been originally joined to the mainland; the intervening channel to the southward being still narrow, shallow, and rocky, and the successive strata of which it is composed corresponding with those of the main."

The features of the coast about Port Stephens are different from those seen to the southward. A number of conical hills, four to six hundred feet high, are visible; two of them—Wacaba and Tomare, constitute the entrance points of Port Stephens—which is a large estuary, fifteen miles in length, and

contracted near the centre to the breadth of a mile, and subsequently further lessened by a woody islet. Nearly two miles within the estuary, on the west shore of the harbour, is the town of Carrington, belonging to the Australian Agricultural Company; and half-a-mile to the westward is Taklu, the charming residence of the superintendent, situated on the crest of a green grassy slope, over which are scattered numerous small bushy lemon-trees, the deep verdure of their foliage interspersed with golden fruit, contrasting with the light-green carpet from which they sprang.*

The estate of the Australian Agricultural Company in New South Wales, comprises an area of upwards of a million of acres, and consists of three separate extensive tracts, situated about 100 miles north of Sydney, between the 32nd and 33rd parallels of south latitude, approached by the fine harbour of Port Stephens, which forms its southern boundary. The southernmost of these tracts is designated the Port Stephens grant; north-west of Port Stephens is the Liverpool Plains grant; and the north-east of Liverpool plains is the Peel's River grant. The Port Stephen's grant is estimated to contain 464,640 acres, and to extend between twenty and thirty miles inland from the sea coast; bounded on the north by the "Manning," a river of comparative magnitude, commencing a little above the head of the navigation, and extending inward or westward twenty miles; on the west by a line south, separating the company's lands from those reserved by the crown for ecclesiastical and educational purposes; on the east by a parallel line separating the same from the crown lands; and on the south by the Karuah river and Port Stephens, a harbour second only to that of Sydney or Port Jackson on the eastern coast of New Holland. The general appearance of the land is hilly, with well-watered valleys, of good soil and pasture, and with abundance of the best description of timber, for building, fencing, and rural purposes generally. The character of the soils necessarily varies with the formation, but they are all capable of growing grain, (maize and millet luxuriantly,) tobacco and cotton, the vine, olive, orange, and citron, and almost every variety of fruits, even to the banana, which flourishes in sheltered situations, and within the influence of the sea air. The valleys, though narrow, afford sufficient scope of rich alluvial soil on the

* Stokes's Voyage in *H.M.S. Beagle*.

banks of the streams for all the purposes of agriculture; the receding and higher lands being well calculated for arboriculture and vineyards; whilst the loftier ranges are clothed with a short, sweet, and nourishing grass, for the pasturage of sheep or cattle—and it is remarkable that the wool produced from the Company's sheep depastured on those hills near the coast, has invariably, from its fineness of texture, realised nearly sixpence per pound more than that produced from a similar breed of sheep fed in the interior, where the grass is more rank. A considerable portion of the lands in this county belonging to the Australian Agricultural Company is of excellent quality, and has been rendered very valuable by the well-directed labour and capital bestowed upon it. Count Strzelecki thus expresses himself concerning the agricultural capabilities of this part of New South Wales and the progress of cultivation:—

“That portion of the country which, from its system of working, and range of tillable land, deserves to be included within the agricultural district, is confined to the valley of the Karuah, which is limited in the extent of its cultivated, but not of its cultivable land, and of which the best tracts are in the possession of the Australian Agricultural Company; to the valley of the Hunter, composed of the confluent valleys of the Goulbourn, Pages, Patterson, and Williams rivers, &c.; the valley of the Parramatta. * * * In these localities, a good many farms are in a very forward state; many exhibit remarkable improvements, and some display only partial attempts, all of which are, however, in the right direction. The farms of the Australian Agricultural Company at Stroud and Booral, the most northern farms of the colony, may be regarded as the first in the rank of improvements. The farm buildings are of the best construction; the tilled lands are almost entirely clear of timber and stumps, well fenced in, well ploughed and worked, and presenting, on the whole, gratifying proofs of well-bestowed capital and labour.

“The orchards and vineyards of the company at Tablee (Port Stephens), which produce the choicest grapes, oranges, and lemons, are not less worthy of notice. It is this orchard which shews most forcibly the extensive range which the beautiful climate of New South Wales embraces in isothermal lines; as there the English oak is seen flourishing by the side of the banana, which is again surrounded by vines, lemon and orange trees of luxurious growth. To the southward of Port Stephens are a series of thriving farms, spreading along the Goulbourn, Pages, Hunter, Patterson, and Williams rivers, which comprise an agricultural district of 2,000 square miles in extent. The excellent harbour of Newcastle (in Northumberland county), good water and tolerable roads, a coal mine, a soil well adapted for wheat, barley, turnips; the vine and European fruits, and a situation the most favourable to the application of irrigation, render this district one of the richest and most important in the colony.”

The little river Karuah, flowing into the north-west corner of Port Stephens, is

navigable for twelve miles, to a place called Booral, where all goods are landed for the Company's stations up the country. Mr. Ebsworth, the treasurer, resides there in a charming cottage almost covered with roses and honeysuckle, and commanding two picturesque reaches of the Karuah. To this gentleman, and to his cousin, Mr. Henry Ebsworth, many years the faithful secretary of the Australian Agricultural Company, great credit is due for the careful superintendence evidenced in the practical working of the judicious and equitable system adopted by this association. Near the town of Gloucester in this county, is an abrupt range of densely wooded hills, called the “Buckets,” which rise to a height of about 1,200 feet above the plain, their summits crowned by precipitous masses of naked rock of fantastic contour, not unlike the castled crags of the Rhine. The situation of Gloucester village is very picturesque; it is a large cattle farm belonging to the Australian Agricultural Company. The village of Stroud, not far distant, is a horse-station of the company: its English character is exemplified by the neat little gardens belonging to the mechanics in the service of the Australian Agricultural Company, and by the cottages covered with roses and honeysuckle.

On the crest of a range of hills in this county, overlooking some wooded lands belonging to the church of England, a singular natural phenomenon has been lately discovered: the front of the line of hills “strikingly resembles the ruins of a fortress: the masses of rent rock are dotted with vast balls, half fixed, and of the exact size of cannon balls: they are easily displaced, leaving a socket, as if they had originally been plunged there by artillery. The balls are very heavy, of a sparkling granite, surrounded in the centre by a white flimsy circle, which it was found impossible to chip.” * Specimens of these balls have been sent to the British Museum and to the Geological Society of London.

Towns.—Raymond Terrace (the chief); Carrington, on Port Stephen's harbour; and Stroud, on the Karuah river. *Rivers.*—Manning, Williams, Chichester, Gloucester, Barrington, and Karuah. *Creeks.*—Tilligerry, Serpent, Limeburners, Onall, Pipeclay, and M'Arthur's. *Eminences.*—Mounts Tallowah and Kanghat.

* *Geographical Gazetteer*, by W. H. Wells, Esq., p. 184. Sydney, 1848.

MACQUARIE COUNTY is bounded on the south by Manning river, from Farquhar's inlet to its confluence with the Barnard river; on the west by a line from the said confluence to Mount Sea-view, and thence by a line to Kippara, a pass in the range dividing the waters of the M'Leay river from the waters of the Wilson river; on the north by that range to the source of the south branch of the Maria river, and thence by that stream to the first section line in the parish of Kalateenee, west of the east boundary of that parish, thence by that section line to the M'Leay river; on the north-west, by the M'Leay river to its mouth, inclusive of the islands; and on the east, by the sea coast, which is picturesquely marked by Crescent head, Point Plomer, Tacking point, Indian and Crowdy heads. The general features of the county are hill and dale, with open forest or grass land, lightly covered with good timber, and free from inundations. Captain King, speaking of this county and the adjacent districts, says, "there are here twelve million acres, in which it is difficult to find a bad tract, and they are in general watered with clear small streams." There are several elevated mountains in the county, viz.—the Three Brothers, Cairncross, Comboyne, Cocome-rico or Mount Sea-view, Kippara, Colapotamba, and the Brokenbago range, which latter divides the basin of the Hastings from that of the Manning river, and is covered all over with a dense forest. On the highest summit of this range, a tall pinnacle of naked rock shoots up perpendicularly above the trees like a church steeple. In some parts of the county, for instance, to the north of the river Manning, there are extensive plains; those called the "Jamaica plains," have an intensely green verdure, as contrasted with the more yellow tinted green of the grassy forest hills. Some large flats are covered with high grass, and timbered by large blue gum and "tea trees," standing widely apart from each other. At the junction of the Manning with the Gloucester river, the scenery consists of ranges of hills either very lightly wooded and grassy, or else covered over with brush timber and entangled vegetation. Most of the park-like hills have rounded conical summits; one heavily wooded range on the south bank of the river is crowned by huge masses of rock overgrown with creepers, which resemble the ivy-clothed battlements of some ancient fortress. Between the Wilson and the

Hastings river, is a very thickly wooded undulating country, tolerably grassy, and intersected by moist tea-tree flats and sedgy hollows. The country at the junction of the Hastings with the Maria river, has a fine appearance, as the reaches of the Hastings are of great length, and have an uniform breadth of about a quarter of a mile. The handsome villa of Dr. Carlisle is on the right bank, and on the left, a pretty cottage with a flourishing garden of vines and fruit trees. The Three Brothers rise majestically near Indian head, their lofty summits overtop all the woody heights by which they are encircled, and command an extensive inland, as well as a broad sea view.

Port Macquarie (278 miles from Sydney, lat. $31^{\circ} 25' 45''$ S.), the county town and the most important north of Maitland, is situated within the harbour on the south side of the Hastings river, and divided into East and West Macquarie, by Coolenbang creek. It is a harbour into which vessels drawing more than nine feet of water cannot safely enter; but there is good anchorage outside, and the shore is not dangerous. The town is well built, on a gentle rise; the houses generally of brick, surrounded by neat verandahs and trellice work; the streets broad, straight, coated with dark red gravel, and levelled like garden walks. A tall square church tower is conspicuously prominent in the highest part of the town. A group of magnificent trees encircles Port Macquarie, and extends along the banks of the river; to the west and north-west is a wide extent of forest country, and among the mountain ranges may be traced the windings of the valley through which the Wilson river flows. Mount Caoulapatamba is sufficiently near to render visible every tree on its grassy declivities, whilst the distant ranges at the M'Leay river, and the huge frowning mountain at the back of Cogo, are half dissolved in blue ether. The beauty and fertility of the land in this vicinity has been noted by several writers, especially the luxuriant vegetation of the coast, when approaching Port Macquarie; dense thickets of cabbage palms and myrtle trees extend down the gently sloping declivities, even within reach of the ocean spray, and every unwooded patch is covered with grass. The lofty forest, too, rises luxuriantly close to the sea, and the tints of the rocks, the foliage, the verdure, are all of a warm mellow hue.

The other towns are Hay, Ballengarra, and Maria-Ville. Kempsey village, at the termination of the north boundary of Macquarie county, twenty-eight miles from the mouth of M'Leay river, has several good brick-built cottages, an inn, store, &c. A fine garden here, belonging to Mr. Sullivan, has fruit trees of all descriptions in greater luxuriance than is to be seen in any other part of the colony. The land in this neighbourhood yields good crops of wheat in dry seasons, and maize at the rate of 75 to 100 bushels per acre. One farm, belonging partly to Mr. Hodgkinson, which had been under the plough for six years, yielded two crops annually—maize, followed by either wheat, potatoes, sugar-loaf cabbages, or Swede turnips. The crops of cabbages and turnips cultivated for the pigs, were twice as abundant as good crops in England. Potatoes were large, but had an earthy flavour.

The principal agricultural farms in the county of Macquarie, are situated on the banks of the Wilson river—a tributary of the Hastings, and a never-failing stream flowing through a narrow valley;—they now form a continuous chain for about fifteen miles, and a very good road connects the whole of them with the town of Ballengarra, where the Wilson river becomes navigable for boats about twenty miles distant, by water, from the town of Port Macquarie. These farms are all composed of alluvial soil of excellent quality.*

On the banks of the M'Leay river, on the northern frontier of Macquarie county, the alluvial brushies which prevail on the lower part of the stream, are superseded where the stream ceases to feel the influence of the tide, by park-like forest ground, verdant rocky eminences, and luxuriant grassy flats of the greatest richness, lightly timbered with apple-trees (so called by the colonists, from the resemblance of the foliage to the English fruit-tree of that name; the tree is the *angophora lanceolata*), whose gnarled branches and light green foliage, render it the most picturesque forest tree in Australia. Several small tributary streams join the upper course of the M'Leay; from the South Dongai creek, whose narrow valley consists of a border of alluvial flats covered with broad-bladed grass growing breast high,

and with a few large blue gum trees scattered so far apart as to offer no impediment to immediate tillage, which is carried on here by the squatters. Dongai creek is hemmed in on both sides by fertile ranges well clothed with grass, and lightly wooded; the scenery is described as very pleasing; the ranges rise in smooth round cones, and their sloping sides, covered with bright green verdure, contrast strongly with the dark glistening green of the brush vegetation, which occasionally invades some of the hills. The stream itself, says Mr. Hodgkinson, is of crystal brightness; it rushes rapidly through the glen, over a bed of large pebbles, and frequently forms diminutive cascades; "this, with the magnificent trees and beautiful flowering creepers, forming natural arches, with a glimpse of distant hills softened and blended with the deep azure of an Australian sky, cannot fail of affording gratification to any one who can admire nature unadorned by art."

Rivers.—Hastings, Wilson, Maria, Manning, Brumo, Ellenborough, and Forbes. *Creeks.*—Tymbank, Piper's, Limeburner's, Pappinburra, Limestone, Koolobungan, Kin-dee, and Cathie. *Lakes.*—Many, but of small extent; principal—the Innes, Queen's, Watson, and Taylor.

The climate of this division of New South Wales is said to be more agreeable than that of Sydney; the mountains approach nearer to the coast, collect the vapours from the sea, and cause more frequent rains; in summer, especially, the heat is mitigated by many heavy thunder showers. It is almost entirely exempt from the hot winds, which are frequent during the summer months, in the more southern parts of the colony; moreover, the north-eastern part of New South Wales, between the great main range dividing the eastern and western waters and the ocean, has never experienced the long droughts which appear to occur septennially in the central and western districts. The greatest drought experienced in the Port Macquarie neighbourhood, was in 1841-2, when the natural grasses were quite desiccated, and the whole country continually in flames, the only young grass for the cattle and the sheep being in the flats; but the water-courses were as full of water as ever; and the wheat crops—which had failed near Sydney—yielded abundantly on the alluvial farms on the banks of Wilson's river—in some places averaging forty bushels of sixty-five pounds each, to the acre.

* Hodgkinson's *Australia from Port Macquarie to Moreton Bay*: to which work I am indebted for much recent information concerning the topography of this portion of the country.

From Moreton Bay to the Manning river, the southern boundary of the county of Macquarie, a distance of about 270 miles along the coast, there are nine rivers, viz.—the Brisbane, Tweed, Richmond, Clarence, Bellengen, M'Leay, Hastings, Camden Haven creek, and the Manning. Dr. Lang, speaking of this region, which he terms *Cook's-land*, says, "I can fearlessly challenge any European geographer to point to any tract of country of equal extent, and within the same parallels of latitude, in either hemisphere, on the coast of which there is a greater number, either of streams of water, or of rivers available for inland navigation."

Several other counties have recently been proclaimed (see map of New South Wales), to the northward and eastward of Macquarie county, but of these I can obtain no details; some description of the rivers flowing through this tract of country, viz.—the M'Leay, Nambucca, Bellengen, Clarence, and Richmond rivers, will be found at p. 489. The country at the base of the main range dividing the basin of the M'Leay river from that of the Nambucca, is generally grassy forest land, thickly timbered with gigantic black butt gum trees and other eucalypti, abundantly watered with numerous permanent chains of water-holes and gravelly water-courses in brushy hollows. From the summit of an elevated range extending to the westward, through Dudley county, in an undulating outline of conical summits, a magnificent and extensive view is afforded; to the westward, amidst a confused mass of mountains rising beyond mountains, covered with forest, the eye can trace the deep, narrow, brushy valleys of the streams forming the Nambucca, curling into the deep mountain recesses. In the north-west direction, tier beyond tier rose in serrated ridges of steep, high conical summits, the view bounded by the dim blue outline of a level crested range of considerable altitude. To the east the eye embraces the dense forests and swamps on the Nambucca river—the silvery stream of its tranquil reaches, and the blue surface of the Pacific, twenty-five miles distant. Towards the foot of these different ranges are grassy slopes—in some places, dwarf palms and ferns have usurped the place of grass—in others, magnificent cedar groves—and on the banks of creeks, enormous wild fig-trees.

A range of mountains characterized by a chain of conical summits, with an average height of 2,500 feet above the sea, divides the

Bellengen river from its tributary Odalberree. This range is composed of soft micaceous talc, coated with a deep soil, and covered on the summit and steep slopes, with luxuriant grass. For twenty miles the summit of this razor-back ridge was found too difficult for riding, the undulations being too steep and frequent. From the top was seen the narrow glen of the Bellengen river, immediately opposite to which, on the north side of the river, rises a gigantic range of about 5,000 feet high, with perpendicular buttresses of 3,000 feet elevation. The outline of this range is a level table land, broken near the coast into undulations, with steep conical summits. A beautiful grassy forest immediately overlooks the Bellengen river, where there is much alluvial land, with brush, cedar plains, and forest flats. The richness of the soil may be judged of by the great size of the cedar and rosewood trees on its banks. The casuarina also grows to such an uncommon height, and the foliage assumes such an unusual form, that it might be mistaken for a species of pine. On the small clear plains a coarse-bladed grass grows more than two feet high, and appears like small wheat fields; the grassy flats are principally wooded by that species of eucalypti called forest mahogany. Mr. Hodgkinson was unable to explore much of the country near the Bellengen river, as in a straight line of ten miles, he had to cross and recross the stream (little inferior in size to the Hastings river), no less than twelve times, on account of the steep, inaccessible forest banks, which formed tangents to the convex lands on either side. He was unable, for want of provisions, to explore the upper course of this "romantic river," which possibly may be found more available for the settler than its explorer supposed.

The Bellengen river is separated from the Clarence river by a bold range of abrupt lofty mountains heavily wooded to the summits, and of a "beautiful colour;" the country between the two rivers consists of verdant plains, grassy forests, steep, brushy ranges, and some rocky water-courses. The Bellengen range of mountains comes near to the sea coast, where it is 1,500 feet high—at eight or nine miles inland, upwards of 3,000 feet, and gradually increasing in altitude as it recedes from the ocean. This range appears to be the highest and least broken lateral offshoot from the great main chain which runs parallel to the Pacific, and it coincides with the Nundewar lateral range

of Sir T. Mitchell, which is given off on the interior or western side of the chain. Near the mouth of the Bellengen river a low range of hills extends along the coast, past the Solitary Islands; the country between these hills and the sea appears to be grassy forest land.

To the northward of Dudley county, through which the Nambucca and Bellengen rivers flow, are the counties of Clarence and Raleigh, divided by the Clarence river. The country available for grazing on the banks of the Clarence is much more extensive than that on the M'Leay river, as the mountains do not attain any great elevation near the coast, and the country is generally level, not only on the banks of the Clarence, but also near its tributaries. There are, consequently, numerous settlers and "squatters," with their flocks and herds, in this neighbourhood. Wool-drays can descend with comparative ease from the rich district on the table land opposite the sources of the Clarence river, to its navigable estuary. The brushes near the mouth of the river are interspersed with the beautiful variety of timber known as the "Moreton Bay pine."

RICHMOND COUNTY is watered by the Richmond river, which at its mouth has scenery resembling that at the embouche of the M'Leay river, namely, mangrove scrubs, tea tree, and swamp oak thickets, which cover the low flats near the mouth of the river; higher up the stream the alluvial land is diversified by brush abounding in cedar and pine, clumps of bangolo palms, reedy swamps, small rich plains, and highly wooded forest flats of great richness. The rest of the county, so far as is known, consists of very thickly timbered forest land of the greatest fertility. Mr. Hodgkinson thinks there are few rivers in New South Wales where so much good available land exists unbroken by densely wooded ranges and ravine. Of the next northern county, the Rous, watered by the Tweed, we know little more than that the hills are thickly wooded.

STANLEY COUNTY comprehends that part of New South Wales, lying between the parallels of 27° and 28° S. lat., bounded on the east by the Pacific, and on the west by the coast range of mountains which forms the dividing shed of the waters which flow towards the ocean, from those which flow into the interior towards the Darling river. Length, from north to south, sixty miles; breadth, sixty. The general aspect consists

of mountains and plains; the latter are very rich, and include Normanby, Laidley, Innes, and Letitia plains.

In lat. $28^{\circ} 2' 40''$ S., long. $152^{\circ} 24' 20''$ E. fifty-four miles south-west from Brisbane town, and sixty-four miles in a direct distance from Point Danger on the sea-coast, there is a remarkable gap in the great dividing mountain range, which was discovered by Mr. Cunningham in 1827, and subsequently explored in 1828, during an expedition which he made from the Limestone hills (now called Ipswich), on the Bremer river, for this very purpose. This important passage from the coast, through a formidable mountain barrier, commences near a valley, from whence there is an ascent through a low forest ridge at south, bending S.S.W. and S.W. through the first mile and-a-half. The acclivity is very gradual, and in another half mile the ridge takes a decided bend to the westward, its surface becomes wide, and presents an open patch of forest ground, timbered chiefly with oak and apple-trees. The ridge again narrows, but the declivity is progressively easy; patches of brush clothe its sides, as also the gullies falling from it, leaving the back-ground clear of wood, open, and grassy. At about two-and-a-half miles the ridge bends to the north of west, and immediately the summit of the pass appears, bounded on each side by stupendous heads, towering to the height of 2,000 feet, named Mounts Mitchell and Cordeaux. Here the ascent becomes steep for 400 yards, and a level surface is reached at the top of the pass or gap, clothed with a thick brush of plants common to the Brisbane river. From this point the waters may be seen falling westerly to Miller's valley beneath. The country contiguous to the eastern entrance of this important means of intercourse between the lower coast line and the upper table land of Darling and Canning downs, and Peel plains, is very beautiful. Mr. Cunningham passed a tract between the gap and Ipswich, apparently part of the 50,000 acres comprising Normanby plains, of which he says—"Nothing can possibly exceed the richness and mellowness of its fine black soil; and certainly there is not, in any explored part of New South Wales, a more beautiful subject for the pencil of the artist than the landscape presented to the traveller from the centre of Bainbrigge's plains, to which no description of mine can possibly do justice." Bremer river, on which Ipswich is built, at ten miles from its mouth,

has a tortuous course and a uniformity of breadth of thirty to thirty-five yards. Beyond Ipswich the river forms a fine natural basin of 100 yards wide; ledges of rocks fill the bed of the river, and separate the tidal salt water from the descending fresh mountain stream. At a few miles from the entrance of the gap, the rich flats and alluvial grounds are adorned with blooming vetch, called by botanists *swainsonia*, and with the *lotus Australis*, or "bird's-eye" trefoil, as also with a *geranium* and a *senecio*, frequently seen in Bathurst county. The grasses are chiefly those of the more southern districts of the colony. The "coral tree," with its splendid scarlet flowers, here grows to a height of thirty-five feet, with a smooth trunk, but thorny branches.

Brisbane, the county town, or *the settlement*, as it is still commonly called, is situated on an elevated ridge of considerable extent, on the north or left bank of Brisbane river, about twenty-five miles from its mouth. This town was founded as a penal settlement, and many substantial buildings were erected by convict labour, which, when the district was thrown open for free settlers in 1842, would, it was supposed, form the nucleus for a large population. These reasonable hopes were, however, frustrated by the pursuance of the same mistaken policy which, in so many other instances, has retarded the progress of the colony, £100 an acre being fixed as the minimum price of building allotments in the town of Brisbane. On the other side of the river, which is here nearly a quarter of a mile in breadth, building allotments were sold at a somewhat lower minimum price, and hence arose another small town, called South Brisbane, in contradistinction to the older settlement. A third town was established, by private speculation, at Kangaroo Point, a peninsula formed by a sharp bend of the river, situated exactly opposite to Brisbane town. This tract being regarded merely as country land, was disposable at the government land sales, at a minimum price of not less than a pound an acre, at little more than which it was purchased by Mr. (now Sir Evan) Mackenzie, and subdivided into building allotments, for those who wished to have a fixed place of residence in the neighbourhood; but could not afford, or did not choose to pay, £100 an acre for a building allotment on the other side of the river.* The population, which, united, might have formed one

respectable and flourishing town, is now scattered among three insignificant places, a consequence which has been the direct result of the system whose chief end was professedly *concentration*. According to Dr. Lang, there is much land of very inferior quality near Brisbane town, on both sides of the river, but particularly on the south side; the tract from Brisbane to Ipswich, or the Limestone hills, situated at the head of the navigation of the Bremer, a distance of twenty-five miles by land, and fifty by the two rivers, being absolutely sterile, with the exception of a small plain of a few thousand acres in extent, called Cowper's plains, about ten miles from Brisbane. In another place, however, Dr. Lang says, that for some distance above Brisbane the river is considerably wider than at the settlement, and where the banks are high and rocky, as is often the case in the lower part of its course, there is generally a considerable extent of level alluvial land on the opposite side, constituting what are called the *brushes*, in which the soil is of the richest description, and the vegetation much more varied and vigorous than on the forest-land, beyond the reach of floods. These flats are found along the whole course of the main river and its various tributaries, and in the higher parts of its course are both more frequent and more extensive than in the lower. Ipswich, or Limestone, is a rising town, well situated at the head of the navigation of the Bremer river, and on the direct route to the Darling downs, by Cunningham's gap. From Ipswich the Bremer pursues a tortuous course, between steep banks, for about twelve miles, to the Brisbane river. A small steamer now plies between the towns of Ipswich and Brisbane. The Bremer is subject to floods, and has been known to rise fifty-three feet above its ordinary level; but the Brisbane being considerably wider, the water, in times of inundation, escapes much more freely, and the floods on that river are, consequently, not nearly so high. Limestone plains, in the immediate vicinity of Ipswich, are a tract of land almost destitute of timber, of the richest and most fertile black mould. The distance to the foot of the mountains is only thirty-eight miles, and quite level throughout; at eighteen miles from Ipswich there are other plains, similar to those at Limestone, called Normanby plains, containing an area of from 40,000 to 50,000 acres.

The whole country bounded by Moreton

* Cooksland—Dr. Lang.

bay—a distance of about fifty miles from south to north—is well adapted for grazing and agricultural farming; the soil around the Glasshouses (peaked mountains, so called by Captain Cook, when he discovered and named the bay), is formed of decomposed lava, and very fertile. The indigenous timber is of great value—the *auracaria Cunninghami* or Moreton bay pine, and the *auracaria Bidwellia* or the Bunya-Bunya tree, have been already mentioned. The mulberry tree grows very luxuriantly. With regard to the adaptation of this locality to the cultivation of the vine, there appears much difference of opinion; but the periodical rains of January and February, coming as they do, just at the season when the fruit needs maturing by a hot sun, seems a great obstacle. The climate and soil appear well suited to the cultivation of the sugar-cane, cotton, arrow-root, tobacco, indigo, and other tropical products; and, according to Dr. Lang, is also admirably adapted for the production of every species of European grain, as well as of those peculiar to warmer climates; for as vegetation goes on without interruption all the year round, the farmer has only to select, for the growth of any description of grain, the peculiar season that will ensure the exact temperature required to bring it to maturity; the barley harvest, being the hardiest grain, comes immediately after the colonial winter, the wheat harvest at the commencement of summer, and the maize harvest so late as to give that inter-tropical grain the full benefit of the heat of summer. This latter crop is a never-failing one at Moreton Bay, yielding, on alluvial land, at the rate of eighty bushels an acre. The English potato, and the Indian or sweet potato, are both cultivated successfully*. The latter is very prolific, and is grown near Brisbane to the weight of eighteen, and even twenty-three pounds each. Coal is found in the neighbourhood of the Brisbane; and the fisheries of the extensive bay and coast may be made very profitable. By recent accounts, it appears that the colonists at Brisbane have commenced capturing the Yungan, called also

* The summer heat of Moreton Bay will, I think, prevent the extensive employment of European agricultural labour at this station; but under a well devised system, and with due encouragement, a large and valuable class of Chinese immigrants might be induced to settle at Moreton Bay, where they would soon become successful cultivators of sugar, cotton, mulberries for silk, tobacco, and other products suited to the soil and climate. The Chinese are now

the dugong or sea-pig of Moreton bay, for the purpose of extracting the oil from the animal; the oil procured in this way is highly spoken of, being remarkably pure and clear; about five gallons is obtained from each animal. The blacks are very expert in harpooning these animals, and they are passionately fond of the flesh, preferring it to any other kind of food.

The chief Eminences in Stanley county are Mounts Brisbane, Hallen, Forbes, Frazer, Edwards, Sampson, Cross, Melbourne, and Stephenson, Frenchplay peak, Tenthill, and D'Aguilar's range. *Rivers.*—Brisbane, Bremer, Stanley, Logan, Teviot, Lockyer, and Pumicestone. *Creeks.*—Coyar, Graham, Franklin, Yarril, and Downshire. *Towns.*—Brisbane (chief), on the Brisbane river; and Ipswich, on the Bremer river. *Harbour.*—The fine haven of Moreton bay; the adjacent islands of Moreton, Stradbroke, and Peel, belong to Stanley county.

Of the three islands which run nearly parallel to the coast, and form the haven termed Moreton's bay, Stradbroke, the most southern island, is thirty miles in length, and five in breadth; at its southern extremity is a sand-spit, parallel to the main land for twelve miles. North of Stradbroke is Moreton island, with a navigable channel between the two of a mile in width. Moreton island runs north for about twenty miles, with a breadth of three miles. The third or most northern is Bribie's island, termed Yareen by the natives; it is seventeen miles long, by two to three broad. There is a channel of eight miles wide, with five to six fathoms water, between Moreton and Bribie islands. These three islands are stated by Dr. Lang to be hopelessly sterile to seaward. Moreton bay, throughout its whole extent of sixty miles long by twenty miles wide, is studded with islands of various sizes, and at its southern extremity it gradually narrows to the appearance of a mere river.

CAVENDISH COUNTY, situated to the north-west of Stanley county, is divided on the south from Churchill county by Lockyer's creek, which is surrounded by extensive plains. Dr. Leichardt says: "I have seen

purchasing land at Sincapore, and cultivating it with their usual skill; thousands would emigrate from Amoy, if the local government of Australia gave them due encouragement. The table land above Moreton bay may probably be more adapted for European outdoor labour, but I certainly doubt the eligibility of Stanley county as a residence for the distressed needlewomen of London.

some forty miles more of the district, and the more I see, the more I feel convinced that it is eminently fit for small settlers." Ridges of small elevation in this county, contain small concretions of carbonate of lime, which are equally found on Darling downs and on Liverpool plains, indicating a fertile country. Besides this description of soil, there are many flats between the primitive mountain ranges and the ridges where a bed of clay lies generally one-and-a-half to three feet below the surface. The forest ground resembles, at present, one uninterrupted oat or rye-field in harvest. *Antistheria Australis*, which grows from three to four feet high, is the predominant grass, and is burnt off from time to time, the ashes form a good manure by which the soil is enriched, the tuft enlarged, and a younger and more nutritious grass formed.

COMMISSIONERS' DISTRICTS, OR SQUATTING STATIONS.—Irrespective of the foregoing counties of New South Wales, there is a large extent of the colony divided into what are officially termed commissioners' districts, or "squattling stations," where the owners of sheep, cattle, and horses are authorized, by licences from the colonial government, to depasture their flocks and herds over certain tracts. From time to time these squattling stations are being converted into counties, as population increases and land is in demand for purchase. In the year 1848, the squattling stations in the Sydney portion of New South Wales were—

Districts.	Chief Places.
Bligh	Dubbo.
Clarence River . . .	Grafton.
Darling Downs . . .	Warwick.
Lachlan	Gundagai.
Liverpool Plains . . .	Tamworth.
M'Leay River	Kempsey.
Maneroo	Cressbrook.
Murrumbidgee	Deniliquin.
New England	Armidale.
Wellington	Molong.

To begin with the southern districts of the colony. The Maneroo has been described in Auckland county.

The *Murrumbidgee squattling district* is situated between the left bank of the Murrumbidgee river on the north, and the right bank of the Murray river on the south; on the east it is conterminous with the Maneroo district. It is one of the largest and finest tracts in New South Wales; has extensive plains and swelling uplands, thinly

wooded, which increase in elevation towards the Australian Alps. The most prominent *eminences* are—Mounts Trafalgar, Battery, Friday, Aikin, Mingeroo, Majonbury, Janil, Talbingo, Kengal, and the Snowy Mountains, where the Murrumbidgee and Murray rivers have their source. The district is well watered by two of the largest rivers in New South Wales, and also by the Doomut or Tumut, Burnett's, and the Coodrabadgee; by the *creeks* Tingella, Yewen-Yewen, Nackie-Nackie, Aidelong, &c. Hamilton plains, on the south bank of the Murrumbidgee and Camden forest, watered by Tingella creek, are extensive and valuable tracts. Albury, advantageously placed on the Murray river, is the post town of the district. It is in the high road from Sydney to Melbourne, through Goulbourn, Yass, and Gundagai. This last-named town, 250 miles from Sydney, is situated on one of the flats of the Murrumbidgee, which is here as broad as the river Clyde at Glasgow; but, like all Australian rivers, subject to expansion from floods. On one occasion, in October, 1844, the Murrumbidgee rose more than forty feet above its ordinary level, and covered the parlour of the inn at Gundagai to the depth of four feet. The Murrumbidgee is here fringed with swamp oaks, which are not found on any river farther south. The banks and districts for many miles above Gundagai are occupied as grazing stations, and at intervals by small farmers.

Lachlan squattling district is situated between the right bank of the Murrumbidgee river, and the left bank of the Lachlan river. This large division of the colony consists chiefly of a series of undulations, with extensive plateaux, such as the Euryalean (between Mount Brogden and Jones hills), and Molle plains, on the south bank of the Lachlan. There are several *lakes*; the principal are—Quawingame, near the confluence of the Lachlan and Murrumbidgee rivers; Campbell's, Goorungutty, and Cudjallogong, or Regent's lake. The chief *eminences* are—Taylor's, Peel's, Macquarie's (or Coccaparra), Yerraraser, Goulbourn's ranges, Mounts Stewart, Gill, Watts, Myarong, Berabidgal, Matta, or Mannar (hill), Maude, Garrow, Meyrick, Balloon, Moriatta, Portesse, and Byng. The *rivers* are the Lachlan, Murrumbidgee, Yass, and Boorowa.

Sir T. Mitchell, speaking of the country near Jugion creek, on the right bank of the Murrumbidgee, on the road which leads towards Sydney, says—"The scenery at

various points of the river seen this day was very beautiful; its chief features consisting of noble pieces of water, umbrageous woods, flowering meadows, enlivened by those objects so essential to the harmony of landscape—cattle of every hue. Each meadow was already covered with the lowing herds, for which it seemed to be prepared." The traces of the industry of man are obvious in fences and substantial wooden houses, with their smoking chimneys, built in the most inviting parts of each cattle run. This region is thinly wooded with the gigantic Yarra eucalyptus, and it is one of the finest pastoral districts in the colony. Nothing definite is known of the Lower Darling River district, but the country appears to deteriorate the further it is explored westward of the great coast range. On that portion of the Lower Darling which is bounded by the Lachlan river, there is good pasturage and several stock stations.

Wellington district.—Adjacent to the counties of Wellington and Bathurst, and between the Lachlan and the Macquarie rivers, is a very fertile tract. The *plains* Wellington, Cannil, Baird, and Gullerong afford sweet pasturage. The *eminences* are Harvey's, Croker's, and New Year ranges, Mounts Coulambals, Laidley, Bugamel, Margangangar, Amyot or Camerberdong, Melville, Allan or Wolga, Picor Talga, Hurds, Paccalang, Gundobillong, and Warranary. *Rivers* Lachlan, Macquarie, Byrnes, Kalungalungaguy, Yamerunna, Belabula, Bell, Molle, Mary, Elizabeth, Bogan or New Year creek, and several other creeks.

Bligh squatting district is bounded on one side by the Macquarie river, and on the north by the Liverpool range, as it extends to Warrabungle range. The pasturage is excellent, and it is well watered. The chief *eminences* are Mount Harris and Warrabungle or Arbutnot's range, which comprises Loadstone hill, Mount Harrison, and Vernon's Peak.

Liverpool Plains squatting district (native name *Corborn Comleroy*) is bounded on the south by the Liverpool or great dividing coast range, on the east by the western extremity of the same great dividing range; on the north and west the boundaries are indefinite. This is the finest pastoral district in New South Wales; situated between two parallel mountain ranges, it is traversed at irregular intervals by narrow belts of forest which divide the plains into a series of natural parallelograms, and excellently

watered by the numerous rivers and creeks which run eastward and westward, and are the source of nearly all the streams to the northward of Sydney. The chief *eminences* are the Warrabungle, or the Arbutnot range, which divide the Liverpool plains from Bligh district; the Great Liverpool range, the Green mountains, Vansittart hills, Pandora's Pass, East Bluff, Mooan, Mac Arthur, Tereil, Murulla, Temi, Spear range, Brecci, Dinbundie, Forbes, Turiel, Shirley, Nundawar or Hardwick's range, Mount Riddell, Albuera, Drummond range, Fraser, Lindsay, Purren Virden, Bullinbulla, and Gulligal. The principal *rivers* are the Peel, Cockburn, Bireboola, Mooriloo, Bowen, Yorke, Turra-beile, Parry, Nammoy, Goonore, Gaora, Coradilla, Mulnuerindie, Maules, Coagi, Buddle, Horton, Kareen, Bombelli, Gwydir, and Darling. The *creeks* are those of Carringoha, Purreonville, Weeves, Ogunbill, Moonbi, Calingorady, Moowar creeks; and the Lobster, Meadow, Welcome, Rocket, Bombelli, Limejuice, Pelican, and Roderigo ponds.

The Australian Agricultural Company hold within the boundaries of this district 562,898 acres out of their grant of 1,000,000 acres, the remainder, consisting of 437,109 acres, are, as previously stated, in Gloucester county.

The Peel river portion of the Australian Agricultural Company's lands, consisting of 313,298 acres, commences at the source of the Peel river, immediately under the great range, and is bounded on the east and north by that river, and on the west and south by marked lines to include the above area. These lands, from their elevation above the sea, and being beyond the genial effects of the sea breeze, are subjected to greater extremes of both cold and heat than the Port Stephen's grant, and are occasionally liable to frosts, but the soils in the valleys are rich and fertile in the extreme, and although crops of maize and tobacco cannot be depended upon, wheat and potatoes may, it is considered, be grown to any extent.

The hills are everywhere richly covered with a tall luxuriant grass, but comparatively bare of timber, not affording in this respect the same facilities as the land at Port Stephens. The Peel river forms, for some miles, the northern and eastern boundary of this portion of the company's possession, and streams of minor importance run through other parts of them.

The remaining grant of the Company, a

parallelogram of 249,600 acres, is not more than fifteen miles from the western boundary of the Peel's river grant, and embraces the greater portion of the flats or levels which were originally a fresh-water lake, since filled in by the washings from the surrounding hills, and consequently containing the richest alluvial soils of very considerable depth; the pasturage on the plains is decidedly herbaceous, on which stock of every description thrive remarkably well: the hills are coated with the same character of grass as that on the hills of the Peel's River tract, differing only from the grass on the eastern side of the Barrier range, inasmuch as it is more rank in growth, and more fattening in quality. The numerous streams that intersect and are comprised within the boundary lines of this portion, on reaching the plains become absorbed in the soils, so that they are somewhat deficient in surface water, which is nevertheless always attainable with ease and certainty at five-and-twenty feet below the surface; and Artesian wells might be here introduced with incalculable advantage.

On all the lands of the company large sums of money have been expended by the company in making roads and bridges, and in the erection of houses and buildings.

The company has also large flocks of sheep—herds of cattle and horses, depasturing on their several locations, the breeds of which are of the purest and most valued kinds, sent originally from this country, France, and Germany, at very great expense, and selected with considerable care and judgment.

M'Leay squatting district is divided by the Macquarie river on the south from Macquarie county; on the west it is bounded by New England district; on the north by Clarence River district; on the east by the ocean. There is a large extent of available land along the banks of the M'Leay river, on whose banks, as before stated, Kempsey, the post-town, is situated. The soft slaty ranges, more than usually disintegrated and decomposed, are very general in the basin of the M'Leay river, and being converted into a rich loose soil, have a comparatively better grassy covering than the other formations; they are not, in general, thickly wooded, and, it is supposed, would be pre-eminently favourable for the growth of the vine, which seems to delight in earth mixed with, or formed from decomposed black clay slate, as is observable on the mountains near

the Rhine, and at Constantia, Cape of Good Hope. At Dongai creek, near the M'Leay river, there are several limestone caves full of stalactites, of singular conformation. Proceeding from Dongai creek, up the banks of the M'Leay river, there are a great number of squatting stations belonging mostly to retired officers. The country they occupy is abundantly watered, independently of the river, by numerous permanent chains of ponds and water-courses. The grass is good, but the country, especially on the north bank, soon becomes elevated, the ranges rising one beyond the other, in endless succession, covered with dense brushy forest, and intersected by ravines and water-gullies. There are scattered sheep stations on the Upper M'Leay and Apsley river; but the rugged mountainous country intervening between them and the Lower M'Leay, prevents all communication between the settlers on either side. Mr. Ralfe, the government surveyor, has discovered a passage over the mountains (some of which are 6,000 feet above the sea) from the table-land of New England, and a road has now been constructed to Port Macquarie, for wool-drays, so that the staple produce is conveyed in the weekly steamers to Sydney. The Solitary Islands are off the sea-coast.

Rivers.—M'Leay, Nambucca, and Bel-
lengen.

New England squatting district, bounded on the east by a line from the confluence of the Barnard and Manning rivers to the top of Mount Seaview, thence by a line to the top of Wirrikimbie mountain, and thence by a line north by compass from Wirrikimbie, dividing the district from Macquarie county, and from the M'Leay and Clarence River districts; on the north, by a line due west, so as to intersect the top of Mount Girard, near the head of the north branch of the Clarence river, and dividing this from the Darling Downs district; on the west by the western extremity of the great dividing range, so as to include the table land; and on the south by the Manning river, which forms the north boundary of Gloucester county. This elevated district is one of the best sheep pastures in Australia. Mr. Pattison remarks, in his work on New South Wales, that nothing will astonish the traveller in the bush more than the rapidity with which villages and settlements spring into existence; a court-house, inn, and store, are the first attempts in a bush township. In the centre of this squatting district is Arma-

dale, which, in 1842, had solely a police-station; in 1848-9, it had two places of worship, five inns, a steam-mill, stores, tradesmen of all kinds, and was a thriving town, with a weekly post to Sydney.

Eminences.—Ben Lomond, Mitchell, Galligal, Bullimulla, Basaltic rock, Wirrikimbie, Mount Seaview, Sugarloaf or Chandler's peak, and the Blue mountains.

Rivers.—Barnard, Apsley, Hastings, M'Leay, Croker, Clarence, Severn, Burrell, Anderson, Dumaresque, Boyd, Mitchell, Man's, and various creeks and ponds.

Clarence River squatting district is bounded on the south by the ranges which form the basin of the Clarence river, on the south side of that river; on the west by the New England district; on the north by the ranges forming the basin of the Brisbane, and the Logan on the south side of these rivers; and on the east by the sea-coast. I do not know the area of this district, which is mountainous. The principal *eminences* are, Mount Lindsay (5,700 feet), Warning (3,300 feet), Hughes, Wohman, Coke, King William, Ballow, and Barney. It is watered by the Boyd, Clarence, Tweed, Richmond, Brunswick, Logan, Teviot, and Albert rivers; and by Urara, Myrtle, Loadstone, Deep, Reynolds, and Yarril creeks.

The following is an extract from a report of Mr. Commissioner Fry, commissioner of crown lands in the Clarence district, and a magistrate of the territory, drawn up in June, 1846:—

"The plains on the banks of the Clarence river are of various sizes, many of them extending along the river for miles, the soil being a deep dark alluvial deposit on a substratum of clay, covered at top by a layer of vegetable decomposition, the accumulation of ages, and so thinly timbered that isolated acres may be found unincumbered by a single tree. The astonishing vegetation with which they are clothed is almost inconceivable, such indeed as I have never witnessed elsewhere save on the equally favoured regions of the Richmond, a river forty miles to the northward of the Clarence. It is impossible to imagine a country more worthy of having bestowed upon it the labour of the husbandman, or one more likely to remunerate him for his toil than the localities to which I refer, as they are remarkable, not alone for the excellence of the land, but for being placed under a climate than which none can be more conducive to the process of vegetation. An almost complete realization of Fenelon's conception with reference to Calypso's isle is exhibited in the climate of the Clarence, as, without any degree of hyperbole, a perpetual spring may be said to prevail during the entire year, for so mild are the seasons that vegetation remains unchecked even in the midst of the so-called winter. Rain is abundant, so much so as to give rise to the opinion that the district is unsuited for pastoral purposes, at least so far as sheep are

concerned. Frost is very unfrequent, and never intense, as may be inferred from its geographical position. The heat in summer is considerable, but an excess of two or three days is almost invariably succeeded by thunder showers which for a time render cool and invigorating the air, occasionally causing an extraordinary rapid change of temperature, the thermometer having been frequently known to vary no less than forty degrees in the space of twelve hours. This sudden caprice of temperature is however not in the least creative of unhealthiness; on the contrary, I am satisfied there is no part of New South Wales, however justly it may be famed for the salubrity of its climate, which is more conducive to the health of the human body than the district of the Clarence river; indeed most others must be confessed to yield to it in this respect, inasmuch as the never-fading mantle of green in which it is perpetually clothed, shields its inhabitants from the ophthalmic diseases so prevalent in other parts of the colony. Were it necessary to adduce any corroboration of this truth, I need only refer to the unsuccessful effort of a medical practitioner to establish himself in the district, who, though eminent both for professional talent and amenity of manner, was obliged to abandon the undertaking, after a fruitless attempt protracted for upwards of two years, his failure solely arising from the almost entire absence of disease, as it cannot be imagined that a population amounting to nearly 1,000 souls, and possessed of 150,000 sheep and 30,000 cattle, would be unable sufficiently to remunerate him were his services required. On the whole, a four years' residence in the district has confirmed me in the opinion, that no country ever came from the hands of its Creator more eminently qualified to be the abode of a thriving and numerous population, than the one of which I have been speaking; and in forming this estimate I have been uninfluenced either by prejudice or by interest, being no way concerned with it save in that arising from my official capacity."

From the thirtieth degree of latitude, there are tidal rivers along the coast to the northward, every forty miles; all perennial streams.

Canning Downs, to the westward of Churchill and Buller counties, are several miles in length, and two to three miles in breadth; on each side of the plains there are ranges of middling height—now a chain of cones, now flat-topped mountains, covered with brush, then long-backed hills sharply cut at their ends. The soil of the downs is black, and yet mild, with many white concretions of carbonate of lime; the vegetation is quite different from that of the forest ground on the other side of the coast range, and the grasses are more various, but they do not here exclusively occupy the ground; they grow, says Leichardt, more sociably in small communities, together, separated by succulent herbs, particularly composites; the creeks are deeply cut, with steep banks covered with reeds. This celebrated explorer of the resources of New South Wales, says: that the finest mountain country he has seen in the colony, is the eastern side of

the "gap," through which the road passes from the Brisbane to the southern parts of Canning downs. Sunny ranges covered with fine grass and open forest, ascend pretty rapidly to the pass. The coast range forms an amphitheatre of dark, steep mountains; a waterfall rushes over a precipice 300 feet high, into a rocky valley, which one might take for the crater of an extinct volcano, if the surrounding rocks warranted such a supposition. Bold isolated mountains appear in the distance, in their various tints of blue, during sunset "dimming through a purple mist." Both sides of the mountain have some brush, particularly the western side, in which many of the trees of the Bunya brush reappear. This is the most western point in which that beautiful palm, the *aracauria Cunninghamia*, has been found; the *Seaforthia* palm is frequent and high. The rosewood acacia is abundant; it has a very agreeable violet scent. The "bottle tree," which is found in various parts of tropical Australia, is seen here; it swells slightly four to five feet high, then tapers rapidly to a small diameter, the whole height about forty feet; foliage thin, crown scanty, leaves lanceolate, and of a greyish green. The Canning and Peel downs, which by some are considered as part of the Darling downs, extend northward to lat. $26^{\circ} 50'$, six miles beyond Jimba creek. Their length is estimated thirty to forty miles; they slope gradually from the great eastern range down to the Condamine.

Darling Downs are in length about 120 miles, from north to south, with an average breadth of fifty miles, bounded on the south by a line extending due west, so as to intersect the top of Mount Gerard, which is near the head of the north branch of the Clarence river, and dividing this from the New England district, on the east by the range dividing the east and west waters, separating this from the Clarence River district and from Stanley county; on the north and west the boundaries are undefined. The plains of this extensive district are the Darling downs, Canning downs, Cecil, Peel, and Waterloo plains. The chief *eminences* are Mount Parker, M'Leay, and Herries' ranges, mounts Sturt, Mitchell, Logan, and Hay peak. It is well watered by the Condamine, Glen, Dumaresque, Boyne, Macintyre, Myall, and other streams.

The Darling downs were discovered by the late Allan Cunningham, in 1827, during the course of an expedition suggested by

then surveyor-general Oxley. Cunningham left the Upper Hunter's river on 30th April, 1827, with six servants and eleven horses, and previous to his departure, expressed to me his conviction, that the discovery of a valuable country would be the reward of his labours. He crossed the dividing range at an elevation of 3,080 feet above the sea, skirted the Liverpool plains at an elevation of 840 feet, through a forest country; and about forty miles to the northward of $31^{\circ} 2'$ S. lat., $150^{\circ} 30'$ E., found that the country had gradually risen to 1,900 feet. After crossing the parallel of 30° , and passing a poor region, the adventurous explorer descended to "a beautiful and well-watered valley, affording abundance of pasturage." This valley terminated sixteen miles farther north, on a stream (the Gwydir) flowing north-west, in $29^{\circ} 51'$ lat., 911 feet above the sea. Proceeding northward through a comparatively inferior tract, he came in lat. 29° , long. $150^{\circ} 40'$ on a river running westerly, eighty yards wide, and very deep, 840 feet above the sea, and 170 miles from the coast. Here the land was good. A country, then arid, on account of the existing drought, was next explored in a north-easterly direction for eighty miles, and eventually led to a clear, pastoral region, which has since proved so valuable. Deep ponds, nourished by streams from the islands immediately to the eastward, extend along its central lower flats, which being permanently watered furnish an almost inexhaustible range of cattle pasture at all seasons. From these central grounds rise downs of a rich, black, dry soil, and of a very ample surface; they furnish abundance of grass, are conveniently watered, and, being above the reach of the floods which take place on the flats during seasons of rain, are well adapted for sheep stations. Some hills are connected laterally with the bold outline of the stupendous-looking coast-line range; they are clothed from head to foot with dense underwood. The greater part of the downs is composed of hill and dale, woodland and plain, forming a most beautifully diversified landscape.

There is communication with the sea-coast from this table land by Cunningham's gap, through Stanley county, to Moreton bay. The mean elevation of the Darling downs is 1,800 to 2,000 feet above the sea; but Mount Mitchell, the highest peak of the adjacent range, is 4,100 feet above the sea. From the Condamine river the country rises very gently—almost imperceptibly, till the

road passes between two hills or ranges, where basaltic rock appears, and very extensive shallow valleys or plains, generally intersected by a creek overgrown with reeds and high grass. Here and there the grass tree is seen, either single or in groups and groves, one foot or more in diameter, and eight to ten feet high. The ranges which border the plains are covered with box-wood; with a gum-tree, called the Moreton Bay ash; and with other trees; but all very scattered. The forest becomes denser on approaching the eastern slopes. Dr. Leichardt thinks there is no equal to the Darling downs for sheep rearing, the mutton being fat and tender, and the wool excellent. One shepherd can here look after two to three thousand sheep; whereas, in other districts, three or four shepherds would be requisite for the care of a similar number. They are traversed, at moderate distances from each other, by streams or creeks, rising in the lofty coast range, and running westward to the Condamine river. The usual extent of a sheep run or station is twenty miles in length, by six miles in breadth, or three miles on each side of one of these creeks; one station, therefore, contains 120 square miles = 76,800 acres. Dr. Lang says, that on the east side of the range towards the coast, the sheep and cattle stations are not unfrequently of this extent. Large plains stretch along the Condamine river, some fifty miles long by twenty-five miles broad—true savannahs, in the centre of which may be seen the sharp line of the horizon, as on the ocean. North-west of the Condamine, on the Cogoon river, are the valuable Fitzroy downs, with "mount Abundance;" and still further north there is an immense extent of pastoral country, discovered by Mitchell, which he states to be of greater extent than the whole of the present squatting districts; and that after his exploring party crossed the Darling river, they never suffered from heat, and had no want of water. There is excellent pasturage in the tracts watered by the Cogoon, Maranoa, Claude, Belyando, Warrego, Nogoa, and other rivers, which flow from the south side of the Plutonic cones—Pluto, Hutton, and Playfair; but the country on the Victoria river is better watered than any other part of Australia seen by Sir Thomas Mitchell. The soil is of rich clay, and covered with luxuriant pasturage. To the north-east, after passing the great plains of the Condamine, Leichardt entered on a

country which was alternately covered with fine open forest land, well grassed, and fit for cattle and horse breeding, and with long stretches of almost impassable brigalow scrub. Along the Dawson river or creek, in 26° S. lat., fine flats extend along its banks and open ridges, with sound ground some miles off the river. At Palm-tree creek, in 25° 34' S. lat., there are rich flats, fine ridges, and a plentiful supply of water. Following up this creek is a flat table land, where the waters are turned to the south-west. Proceeding towards Robinson's river or creek, the whole country is openly timbered, the ridges at the upper part of the creek, in part, covered with silvered-leaf iron bark, and well adapted for sheep. Fine flats extend along its bank, when first met with, in 25° 28' S. lat. At Zamia creek, in 24° 54' S. lat., there is a flat country of very great extent, almost unbounded by any rise towards the north-east. The creek is accompanied by small flats and thick scrub; but the flats extend more and more, and the scrub recedes as it approaches the large open country, which appears thinly timbered. The reader may follow, with his eye, these tracts of country, along the routes of Mitchell and Leichardt, in the accompanying map of New South Wales. A more detailed account of the new regions they explored is given at pp. 388 to 393.

The country north of Stanley county, not yet divided into counties, is marked by a very high range of sienite, broken through by basaltic rock, dividing Stanley county from the Wide Bay district. To the northward of the 27th parallel is the Bunya-Bunya country, so called from a gigantic tree of that name, with an umbrella-like head, which overtowers all the trees of the brush, and at certain seasons (about every three years) supplies the aborigines with a very palatable food, which they travel a distance of two or three hundred miles, periodically, to obtain. Some of these giants of vegetation, which rise to 150 feet, as straight as a gun barrel, have a circumference of twenty feet, at six feet elevation from the ground; the cones, which are about one foot long, and three-quarters in diameter, somewhat like a pine-apple, contain forty to fifty scales, beneath which a kernel is found, which Leichardt says, is "delicious eating," and that it is difficult to cease eating them. These trees, which look like "pillars of the blue vault of heaven," extend over a brush about fifty miles in length, by ten in breadth.

The "Glasshouses," in this neighbourhood, so named by captain Cook, rise out of low ranges—some like needles, others like castles—the highest (Biroa or Birwah) is about 1,000 feet high, composed of rock entirely different from the surrounding mountains. Dr. Leichardt, who had seen similar mountain features in the neighbourhood of *Clermont-Ferrand*, in Auvergne, considers these isolated cones to consist of what geologists call rockdomite. The Biroa is extremely steep, and its sides almost naked rock; but wherever a hollow or depression has allowed the accumulation of some soil and of moisture, a rich vegetation appears, single but full high bushes of a broad-leaved boronia, a dendrobium with red blossoms, and other flowers. Leichardt thinks that the sea once heaved against these mountains, which are surrounded by sandstone ridges of a coarse grain. The grass-tree (*Xanthorrhaceæ*) grows in thousands (except on Darling downs, or other places possessing a very rich, black, mild soil containing much carbonate of lime, this is generally a sign of a poor or thin soil); casuarina, the apple, and other trees, abound in the district. The Boyne river, which traverses the region east of Wide bay, was discovered by Mr. Henry Stuart Russell. He found, after leaving Jimba creek (see map of New South Wales), that the whole character of the country alters—instead of the wide-spreading plains upon the Darling downs, there is a fine undulating country thickly timbered, and covered with the most luxuriant grass; the ridges are chiefly granite. The bed of the Boyne river is 1,500 feet above the sea. On the first day's journey down the river, the explorers passed over some lovely country; nothing could be more beautiful and luxuriant than the valleys; the foliage of all the trees, amongst which is the conspicuous wide-spreading "apple tree," appeared fresher and brighter than any Mr. Russell had seen in any other part of Australia. Droughts, they found, were unknown; the soil, dark and rich; the grass, chiefly oaten, which is the most fattening; the ridges high (always the sign of good sheep-ground,) and well wooded, chiefly with the broad-leaved iron bark. On the second day's journey down the Boyne, many streams joined it from the east and west; the land became more mountainous, and the valleys richer and more fertile. The third day the travellers stopped at Barrendowan, "a beautiful spot," fifty miles in a direct

north line from Jimba. On the fourth day they came upon a full flowing stream from the eastward, which they called the Stuart. The journey was continued during sixteen days, for 300 miles along the banks of the Boyne—though the distance from Jimba was not supposed to be more than 150 miles. Where Mr. Russell's journey terminated, the climate was too warm for the growth of wool; but the country was well adapted for the cultivation of rice, sugar, and other tropical products. On the upper part of the river Mr. Russell says: "there is an expanse of the finest country for sheep and cattle, and also for the cultivation of European productions."

Irrespective of the arrangement of counties and districts, the colony is divided into three dioceses, viz., Sydney, Newcastle, and Melbourne; the latter includes the whole of the Victoria or Port Phillip district; Newcastle comprises the seven northern counties of New South Wales, viz., Northumberland, Gloucester, Hunter, Durham, Brisbane, Bligh, and Phillip counties; the Sydney diocese comprises all the remainder of the territory not included in either of the two before-mentioned dioceses. The Episcopalian churches and chapels in New South Wales, scattered throughout the colony, are in number—of stone, 28; of brick, 30; of wood, 12. The Roman catholic chapels—of stone, 28; of brick, 10; of wood, 6. The Presbyterians are divided into the presbytery of Campbelltown (three chapels), of Maitland (five chapels), of Melbourne (five chapels), of Sydney (five chapels and two temporary), and of Windsor (three chapels). The Wesleyan methodists have forty-two chapels in the different counties of New South Wales.

I have endeavoured to delineate the leading features of this noble colony, according to its several divisions; but as may naturally be supposed, a region that extends for more than one thousand miles along the shores of the Pacific, viz., from Cape Howe to Hervey's bay, and upwards of five hundred miles inland, i.e. from the ocean to the river Darling, and whose colonization is, comparatively speaking, the work of yesterday, can yet be but partially known. If we view New South Wales as a region ten times the size of England, with a climate unsurpassed for salubrity, and peculiarly adapted for the Anglo-Saxon race, with a table-land of

492 AREA, POPULATION, CULTIVATION, AND STOCK OF EACH COUNTY.

nearly half-a-million square miles, supported for a thousand miles by gigantic mountain buttresses of four to six thousand feet high: this table land for the most part throughout the whole year covered with the most nutritious herbage, admirably adapted for the food of sheep and cattle, and intersected by a network of streams; the mountains clothed with useful timber, the valleys, where cultivated, yielding fifty to one hundred-fold of grain, the coast line indented with secure havens, and the ocean, the lakes, and the rivers teeming with fish—some idea may be formed of the importance of this valuable section of the British empire.

The limited extent of which we have as yet availed ourselves of the blessings thus

vouchsafed to England, will be best manifested by shewing, in a tabular form, the area of each county and district, the small number of acres cultivated, the quantity of live stock, and the number of acres to each individual in each county and district. It will be observed from the annexed table, that in the counties there are from five hundred to five thousand acres to each inhabitant; in the districts not yet formed into counties, the range is from five thousand to ten thousand acres for each European resident. The total number of inhabitants on about 96,909,364 acres, is 154,515, which gives for the portion of New South Wales included in these details, 628 acres for each Anglo-Saxon at present dwelling in the land:—

Counties and Districts in New South Wales, exclusive of Port Phillip.	English acres, in each about	White Popula- tion in 1846.	No. of acres to each inhab- itant, about	Acres culti- vated, 1848.	Houses in each, 1846.	Number of Live Stock in 1848.			
						Horses.	Horned Cattle.	Sheep.	Swine.
COUNTIES:—									
Argyle	1,248,600	5,000	250	4,927	583	3,652	22,831	260,708	1,285
Auckland	1,536,000	1,000	1,400	—	100	—	—	—	—
Bathurst	1,190,400	4,391	297	4,656	670	3,614	18,339	266,369	1,021
Bligh	1,070,120	598	2,140	403	65	1,015	6,551	119,352	63
Brisbane	1,150,160	1,406	820	732	183	1,795	10,153	132,319	949
Camden	1,140,320	8,323	142	12,071	—	5,490	33,953	38,657	6,156
Cook	1,065,600	3,598	355	7,508	—	2,112	8,929	13,104	4,283
Cumberland	914,800	73,538	12	34,311	—	13,294	29,710	11,265	13,728
Durham	1,354,880	7,554	193	18,437	1,273	7,014	36,977	122,588	8,085
Georgiana	1,231,360	953	1,367	2,086	101	2,928	24,517	198,325	936
Gloucester	1,376,200	2,399	687	4,061	—	1,180	21,176	3,593	2,662
Hunter	1,315,840	1,190	1,200	2,555	222	1,416	6,776	11,239	1,735
King	1,159,840	1,665	724	1,598	247	1,319	16,200	106,986	708
Macquarie	1,408,000	1,973	740	1,200	316	872	14,544	14,300	698
Murray	1,458,080	2,721	730	3,632	351	4,340	28,288	328,972	1,339
Northumberland	1,498,880	13,335	115	15,816	2,802	5,827	34,563	21,806	10,653
Phillip	1,035,520	641	1,550	722	39	1,033	6,030	89,800	163
Roxburgh	972,160	2,353	486	2,570	349	2,420	18,250	188,900	630
St. Vincent	1,704,884	2,102	852	3,689	367	2,329	20,724	62,504	3,118
Stanley	2,000,000	1,599	1,333	42	257	446	3,947	23,829	145
Wellington	1,069,840	970	1,177	693	—	681	11,548	77,693	256
Westmoreland	1,018,880	1,575	179	1,787	—	2,040	13,277	46,994	924
COMMISSIONERS' DISTRS.:—									
Bligh	5,000,000	788	7,143	305	70	1,313	52,940	193,221	—
Clarence River	3,000,000	1,225	2,500	331	72	1,405	48,847	116,767	867
Darling Downs	8,000,000	658	11,666	180	45	1,200	40,600	553,000	60
Lachlan	10,000,000	2,198	5,000	2,046	209	4,386	130,594	355,600	791
Liverpool Plains	10,000,000	2,110	5,000	—	233	3,946	130,081	341,465	—
McLeay River	2,000,000	466	5,000	440	52	884	17,128	250	706
Maneroo	2,000,000	1,916	1,052	1,969	185	5,446	106,530	353,252	603
Moreton Bay	2,000,000	268	10,000	58	14	1,127	19,412	290,962	145
Murrumbidgee	12,000,000	2,592	6,000	2,950	243	4,586	132,301	704,165	1,200
New England	5,000,000	2,231	2,500	1,400	114	3,582	79,820	822,603	1,000
Wellington	10,000,000	1,199	9,090	194	92	1,683	69,385	277,025	232
OTHER DISTRICTS:—									
Gwydir	—	—	—	—	—	2,060	118,097	109,347	50
Lower Darling	—	—	—	—	—	480	21,062	39,621	25
Wide Bay	—	—	—	—	—	51	36	20,787	—
Burnett	—	—	—	—	—	372	6,409	204,734	—
Maranoa	—	—	—	—	—	62	5,639	8,500	—
Total	96,909,364	154,515	—	133,369	9,254	97,400	1,366,164	6,530,542	65,216

Note.—Where a dash (—) is inserted, there are no returns

By some it has been supposed that the labour market of New South Wales was overstocked, by the immigration of the last ten years; but the foregoing exposition of the state of each county indicates the reverse. According to an able and interesting report from the emigration agent for New South Wales (F. L. S. Merewether, Esq.), dated Sydney, 31st May, 1849, it appears that the total number of assisted and unassisted immigrants into the Sydney and Port Phillip districts of New South Wales, during each of the ten years between the

1st of January, 1838, and 31st of December, 1848, was only 75,252, about *one third* of the number who proceed in one year from the United Kingdom to the United States. Of the 75,252 immigrants into New South Wales during those ten years, 60,614 persons were assisted by the income derived from the sales of crown lands in the colony, to the amount of nearly one million sterling (£975,433), or at the rate of upwards of £16 per head. The details of this remarkable fact are thus given in the official returns laid before parliament 31st January, 1850:—

Year.	Assisted Immigrants.								Unassisted Immigrants.						Gross Total of Immi- grants.
	Number landed.				Total.	Cost of Conveyance.			Number Landed.						
	Sydney District.		Port Phillip District.			Passage paid out of Colonial Funds.	Gratu- ities to Various Officers.	Total.	Sydney District.		Port Phillip District.		Total.		
	Above 14.	Under 14.	Above 14.	Under 14.					Above 14.	Under 14.	Above 14.	Under 14.			
1838	3,601	2,501	—	—	6,102	£124,512	£6,756	£131,269	1,202	126	—	—	1,328	7,430	
1839	5,675	2,177	479	85	8,416	133,847	10,541	144,388	1,632	351	95	55	2,133	10,549	
1840	4,066	1,150	1,298	123	6,637	100,641	6,217	106,858	1,143	163	413	130	1,849	8,486	
1841	9,297	2,891	6,153	1,762	20,103	313,490	17,477	330,968	1,454	286	449	191	2,380	22,483	
1842	3,818	1,253	1,304	448	6,823	97,568	5,612	103,180	1,165	369	490	140	2,164	8,987	
1843	—	—	7	4	11	18	—	18	822	145	115	49	1,131	1,142	
1844	1,790	936	909	504	4,139	60,821	2,986	63,808	417	68	50	13	548	4,687	
1845	351	146	1	—	498	6,897	562	7,459	333	128	78	59	598	1,096	
1846	—	—	—	—	—	—	—	—	327	75	67	3	472	472	
1847	—	—	—	—	—	—	—	—	412	103	230	71	816	816	
1848	3,127	1,249	2,533	976	7,885	81,248	6,232	87,480	547	104	494	74	1,219	9,104	
Total	31,725	12,303	12,684	3,902	60,614	£919,047	£56,386	£975,433	9,454	1,918	2,481	785	14,638	75,252	

Note.—It is remarkable, all circumstances considered, with how few mischances this migration across 15,000 miles of ocean has been carried on. One highly respectable shipping firm of London, Messrs. Marshall and Eddridge, have despatched to Australia in the eighteen months ending December, 1849, forty-three ships of 23,605 tons, containing 7,181 statute adults, without, I believe, a misfortune happening to any ship. The voyages have averaged 107 days to Sydney and the deaths have been only about 1½ per cent., which shows a degree of care highly commendable in the agents. According to the official returns, it appears that the number of assisted emigrants who embarked from the United Kingdom for New South Wales, was 7,855, and that the number landed in the colony was 7,885, the increase by births having exceeded by 30 the decrease caused by deaths. Thirty-two vessels were employed in the service, and the average contract rate paid by the government for each statute adult, was about £12 11s. The passage-money amounted altogether to £83,094, of which sum £1,846 was contributed by immigrants themselves, leaving £81,248 to be charged on the colonial immigration fund. Of the total 7,885 immigrants, 4,621 were from England, 1,483 from Scotland, and 1,778 from Ireland. The proportion of males was 3,925, and of females 3,960. The number of these who could neither read nor write was 1,811, of whom 851 were under the age of four years. With regard to the religious persuasions, the totals were—Church of England, 3,801; Church of Scotland, 1,296; Wesleyans, 750; other Protestants, 711; Roman Catholics, 1,317; and Jews, 10.

This important subject of emigration, however, must be reserved for a distinct portion of this work. I shall therefore merely observe, that the cry still, in New South Wales, is for more labour; so far from the labour market being overstocked by the introduction of 75,000 persons in ten years, the demand in the several counties and squatting districts is extraordinary. In May, 1849, on the Liverpool plains, and in New England and other districts, instant employment was given, at the following rates of wages, with provisions and lodging:—To shepherds, £15 to £28; hut-keepers, £18 to £22; farm labourers, £17 to £30; bullock drivers, £30; bricklayers, masons, car-

penters, and wheelwrights, £35 to £50; and overseers, £40 to £60 per annum; women servants, £15 to £25 a year; and these rates with wheat at 4s. to 5s. per bushel, and meat at 2d. per lb.

The colonial government has established depôts for immigrants at Paramatta, Bathurst, Goulbourn, Maitland, and Moreton Bay; to any of which places immigrants may be conveyed at the public expense immediately on their arrival. At all the depôts the immigrants are provided with food and lodging until they receive such offers of employment as may be considered fair by the officers appointed to the superintendence of the depôts. I cannot, therefore, better

494 PRODUCTS OF DIFFERENT DISTRICTS OF NEW SOUTH WALES.

conclude this description of the several localities in New South Wales, than by giving the following table, showing the principal productions of each district, and the demand for labour in them. This statement is compiled from returns furnished by the benches of magistrates in the dif-

ferent parts of the colony, for the first quarter of the year 1849; and, although somewhat voluminous, it is too important to intending emigrants, and too illustrative of the condition of the various divisions of the territory, to be omitted, or even curtailed:—

Districts.	Distances from Sydney in English miles.	Principal Agricultural and other Productions of the District.	Demand for Labourers, and description of Labourers required.
Sydney	—	The chief productions are vegetables and fruits.	The supply of mechanics and tradesmen is now kept up by the Colonial youths (sharp intelligent lads), who, after having completed their various periods of apprenticeship, enter the labour market, and are said to be clever and expert workmen. Farm labourers and female domestic servants are in request.
WESTERN.			
Paramatta	15	Hay, wheat, green barley, and maize, grapes, oranges, lemons, and vegetables.	There is a great demand for all sorts of country labour.
Windsor	34	Wheat, maize, potatoes, and hay.	All descriptions of country labour are in request, and a sufficient supply cannot be obtained.
Penrith	33	Wheat, barley, oats, maize, potatoes, tobacco, hay; grapes for making wine are grown to a considerable extent.	Female domestic servants and general labourers may readily obtain employment, at a fair rate of wages. Since the harvest commenced there has been a great scarcity of labour felt in this district, and farm labourers can readily obtain employment, at good wages, during the present season.
Hartley	78	Wheat, potatoes, and oats.	There is no particular scarcity of labour in the district, but shepherds and farm labourers are still in demand.
Bathurst	113	Wheat and barley	There is still the same demand for servants of the following descriptions, viz.:—Shepherds, hutkeepers, farm labourers, cooks, housemaids, and general house servants. Single men and women, or married couples without children, would obtain employment readily.
Carcoar	144	Wheat, barley, oats, potatoes, hay.	Farm labourers, shepherds, hutkeepers, and domestic servants, particularly female servants, are in request. They are not to be hired at any wages.
Frederick's Valley .	152	Wheat, hay, corn, and potatoes. There has been an abundant crop of wheat and hay, but the potato and the corn crops will be a failure, in consequence of the drought.	Shepherds and hutkeepers are in request.
Molong	163	Wheat, corn, hay, wool, meat, and mineral productions.	An additional supply of labourers of the following descriptions is still wanting: Shepherds, watchmen, stockmen, miners, and house servants, male and female.
Binalong	205	Wheat, oats, barley, maize, potatoes, hay.	Shepherds, watchmen for sheep, agricultural labourers, blacksmiths, and house servants are in demand.
Wellington	230	Wheat, maize, and hay . . .	Shepherds, hutkeepers, house servants, and general farm servants are in request.
Dubbo	270	There is little or no agriculture.	The demand for labourers of the following descriptions is still urgent,—carpenters, stonemasons, stockmen, hutkeepers, shepherds, sawyers, fencers, and farm labourers.
Mudgee	150	Wheat, maize, &c.	Shepherds, hutkeepers, and house servants are in demand.
SOUTHERN.			
Liverpool	20	Wheat, hay, and maize . . .	Female house servants are in great demand. They are not procurable in the district.
Campbelltown . . .	33	Hay, wheat, corn, and butter	Farm and domestic servants, male and female, are in urgent demand.
Camden	39	Wheat, maize, hay, and dairy produce. The culture of the vine is also considerable, and increasing yearly. A good many horses are bred, and some sheep.	This district is amply supplied with mechanics, but there is a scarcity of the other kinds of labour. Wages are decidedly on the rise. From the abundance of fertile land, and the proximity to the Sydney market, this district affords an opening for the comfortable settlement of a dense population. During the last five years the number of inhabitants has doubled itself. There are also ample means for public worship, religious instruction, and education.
Picton	49	Wheat, maize, rye, oats, barley, hay, butter, &c.	All descriptions of country labourers are in request, chiefly general farm servants, such as ploughmen, labourers, gardeners, milkmen, snowers, and thatchers.

Districts.	Distances from Sydney in English miles.	Principal Agricultural and other Productions of the District.	Demand for Labourers, and description of Labourers required.
WESTERN.			
Wollongong	64	Wheat, maize, oats, barley, potatoes, hay, and butter.	Steady, sober, and honest agricultural labourers and milkmen are much wanted in this district; also, female servants. Agricultural labour only is in request.
Berrima	81	Wheat, oats, barley, potatoes, hay, and all descriptions of English grain.	Farm labourers and domestic servants are in request.
Kiama	88	Wheat, maize, potatoes, oats, barley, butter, cheese, honey, beef, and pork.	Farm and house servants, and milkmen are in request.
Bungonia	117	Wheat, barley, maize, oats, hay, potatoes, cheese, and butter.	Labourers of the following description are in request:—Carpenters, wheelwrights, and blacksmiths; shepherds, farm labourers, and house servants, especially females.
Marulan	108	Wheat, barley, maize, oats, hay, potatoes, cheese, and butter.	Carpenters, wheelwrights, stonecutters, watchmen, and cooks, shepherds, labourers, house servants, especially females, are in request.
Goulbourn	125	Wheat, maize, barley, oats, and potatoes.	Shepherds, farm and domestic servants, both male and female, are in request.
Braidwood	164	All kinds of grain	All kinds of country labour are in request.
Shoalhaven	103	Wheat, maize, potatoes, and dairy produce.	Labourers are very scarce and wages high in consequence. Agricultural labourers and dairymen are most in request.
Broulee	209	Wheat and potatoes, principally with maize, barley, and oats.	Farm labourers and female servants of all work are in request. It is impossible to procure female servants, in particular general house servants. There are no farm labourers to be got. In harvest, or any other hurried time, the small settlers are obliged to assist each other.
Cooma	251	Wheat, barley, potatoes, and oaten hay. There is a good supply of the above this season, with the exception of the potatoes.	Good house servants and shepherds are in demand, and would readily find employment in this district. The labour in request is chiefly that required for pastoral and agricultural purposes.
Eden	258	Wool and tallow; little or no grain of any description; potatoes and hay are the only articles of farm produce raised.	Shepherds, stockmen, and hutkeepers, are in request.
Queanbeyan	182	Wheat, barley, maize, potatoes, and hay.	Domestic servants of all descriptions are much required in this district.
Yass	179	Wheat, maize, oats, barley, hay, potatoes, fruits, and vegetables.	Labourers and servants of every description are in great request, and improvements are lying over for want of them.
Tumut	225	Wheat, oats, hay, maize, and potatoes.	The operations of the settlers are completely paralysed for want of labour. Children from eight years of age to sixteen are engaged at wages from £12 to £20 per annum. The labourers wanted are shepherds, hutkeepers, farm and house servants, laundresses, housemaids, and nursemaids.
Gundagai	244	Wheat, maize, potatoes, and hay.	Labour of every description is much wanted. Wages are very little, if any, lower than last quarter. The principal demand is for stockmen, shepherds, hutkeepers, watchmen, agricultural labourers, and domestics. A few mechanics would meet with constant employment.
Wagga Wagga . . .	308	Wheat, oaten hay, maize, in limited quantity; potatoes to a limited extent; wool and tallow. The soil, however, is capable of producing, in luxuriance, every description of crop by the medium of ordinary industry. Fruits of all kinds thrive well; and the vine, which has been latterly introduced, promises to rank amongst our principal products.	The employers of labour in this district are all complaining of the very high rate of wages, and improvements of every kind are neglected in consequence. Were wages low and labour abundant, the settlers here could give employment to at least 500 fresh male labourers every year. There is now a demand in the district for carpenters, smiths, wheelwrights, sawyers, brickmakers, shepherds, agricultural labourers, and domestic servants, male and female.
Albury	379	Wheat, maize, barley, oats, grass, and oaten hay, potatoes, &c.	Shepherds, watchmen, agricultural labourers, and female domestic servants are in request.
Moulamein	400	Sheep, cattle, and wool. No agricultural productions.	There is an ample field for shepherds, hutkeepers, and others who will make themselves useful about sheep-stations. The most helpless will find employment if he has only the use of his limbs and legs. The present demand is for shepherds, hutkeepers, and bush carpenters.

496 WAGES FOR LABOUR, AND DEMAND FOR IT IN N. S. WALES.

Districts.	Distances from Sydney in English miles.	Principal Agricultural and other Productions of the District.	Demand for Labourers, and description of Labourers required.
NORTHERN.			
Brisbane Water	30	Maize, potatoes, onions; also, oranges, grapes, and other fruit.	The demand for labour has been gradually increasing since the commencement of 1845, and many people would hire men if they could get them. The sum given to a labouring man does not, by any means, indicate the amount really paid by the employer for efficient service. There is abundant employment in the district for men who work by the job in the bush, chiefly on their own account, as sawyers and splitters, and who either sell their produce on the spot, or send it to Sydney; consequently, some of the best workmen are at work on their own account, and most of those employed on farms are in some way inefficient, which increases their wages virtually from 10 to 20 per cent. or more, by reason of the labour performed by them being below the average quantity or quality. The want of labour and high wages still operate in limiting the cultivation of land. We think that vineyards (for which the soil is, in many places, well adapted) would be extended if labour was not so high.
Macdonald River	66½	Wheat, maize, barley, and potatoes.	There is a great demand for general agricultural labourers in this district.
Wollombi	93½	Wheat, maize, potatoes, hay, grapes, &c.	Male and female farm and domestic servants are in great demand.
Newcastle	70	Maize, wheat, barley, oats, hay, and lucerne, potatoes, beef, pork, poultry, butter, cheese, salt, cloth, leather, fruit, and wine.	Agricultural labourers and female servants are in request.
Raymond Terrace	85	Wheat, maize, barley, oats, potatoes.	Shepherds, domestic servants, male and female.
Port Stephens	91	Wheat, maize, potatoes, hay, tobacco, cheese, butter, bacon, hams, hides.	Farm labourers, bullock drivers, stockmen, wheelwrights, splitters, and fencers are in request.
Dungog	160	Wheat, maize, barley, millet, potatoes, tobacco, cheese, hay, fruit, and wine.	Agricultural labourers and house servants are in request.
Paterson	131	Wheat, maize, barley, oats, potatoes, hay, tobacco, fruits of all kinds.	A slight reduction has taken place since the arrival of immigrants, but the demand for useful labourers of the following descriptions is still urgent:—Males—labourers of all sorts, farm labourers, and shepherds. Females—house-servants of all work, cooks, and laundresses.
Maitland	110	Wheat, maize, hay, tobacco, and grapes.	Agricultural, pastoral, and domestic servants are in request.
Singleton	124	Wheat, maize, and hay	Domestic servants are much wanted; shepherds and labourers are also in request.
Muswellbrook	156½	It is not, generally speaking, an agricultural district, there are several vineyards.	The difficulty in obtaining labour is very great, and the amount demanded, as wages, is ruinous to the proprietors. The immigration of the past year has not at all affected the price of labour in this district. Shepherds and farm servants are most in request.
Merton	170½		
Scone	182		
Murrurundi	200	Wheat, maize, potatoes, and wool.	All kinds of country labour are in request.
Cassilis	335	Wool and hay	Shepherds and watchmen are principally in request.
Wee Waa	250	Wool and fat stock	Shepherds, hutkeepers, stockmen, and country mechanics are in request.
Tamworth	244	Wheat and maize	The demand for labour in the district is on the increase, and likely to continue so. The descriptions required are shepherds, stockmen, hutkeepers, farm labourers, and blacksmiths.
Warialda	280	Wheat and maize, but in quantities so very small as to be of no importance.	The recent immigration has not yet exercised any perceptible influence on the rate of wages in this district; the demand for labour still exceeds the supply to such an extent, as to occasion great loss and inconvenience to employers. Shepherds, bullock-drivers, house servants, and labourers of every description are in request.
Port Macquarie	278	Wheat, hay, maize, and potatoes.	Farm labourers, shepherds, and house servants are in request. Female servants are much wanted.
M'Leay River	250	Maize, wheat, a few potatoes, and a small quantity of tobacco.	There is demand for labour in the district, to which the supply is not equal, and a number of labourers of the undermentioned descriptions would find immediate employment at remunerating rates—stockmen, farm labourers, and bullock-drivers; and a few single females as general house servants.

Districts.	Distances from Sydney in English miles.	Principal Agricultural and other Productions of the District.	Demand for Labourers, and description of Labourers required.
NORTHERN.			
Wellingrove . . .	330	Wheat, potatoes, and corn .	Although wages are about £3 to £4 less, it can only be effected by great risk in the increase of numbers of the flocks, occasional employment of blacks, and thus standing out against the exorbitant wages asked, waiting any opportunity to replace those who will not take any reduction. The most urgent demand is for shepherds.
Armidale	334	Wheat, barley, oats, maize, and potatoes.	Shepherds, watchmen, labourers, and mechanics are in request.
Tenterfield	334	Wheat, maize, and potatoes, for local consumption; also, wool and tallow for exportation.	Shepherds are most wanted, but farm labourers and mechanics are also in request.
Tabulam	359	Maize and potatoes	Shepherds, hutkeepers, and stockmen are in request.
Grafton	280	Wool, tallow, maize	Great scarcity of shepherds, stockmen, farm labourers, bullock-drivers, and house servants. Good house servants are not to be obtained.
Canning Downs . . .	390	Maize, potatoes, wool, tallow.	Many hundreds would find employment. Shepherds, watchmen, joiners, carpenters, smiths, agricultural labourers, and domestic servants of both sexes.
Warwick	400	Wool and tallow	Shepherds, watchmen, fencers, carpenters, blacksmiths, wheelwrights, agricultural labourers, and domestic servants, of both sexes, are in request. Many hundreds would find employment.
Drayton	409	Maize	The demand for labourers, shepherds, and domestic servants is great, and large numbers would find immediate employment.
Brisbane	450	The vegetable productions are chiefly maize, potatoes, and garden stuff, a very little oats for hay.	Stockmen and shepherds are in request.
Ipawich	470	Wool and tallow	Stockmen, shepherds, bullock-drivers, and hutkeepers are the descriptions of labourers in request.

GEOLOGY AND SOIL.—It would be unreasonable to expect connected details concerning the geological formation of a country so newly discovered, and still so imperfectly known; but the valuable labours of Count Strzelecki, Sir Thomas Mitchell, Messrs Berry, Jukes, and others, have furnished much interesting data, from which the following statements are derived:—The line of coast throughout the territory of New South Wales, presents in general an aspect of bold perpendicular cliffs of sandstone, lying in horizontal strata. These cliffs are occasionally interrupted by sandy beaches, behind which the country is low, or undulating, the high land retiring to a considerable distance. These spaces are supposed by Mr. Berry to have formed, at no very remote period, the entrances of bays and arms of the sea; indeed in many parts they are still occupied by sandy beaches, extensive salt water lagoons, being separated from the ocean only by a bank of sand, through which the impetuous waves even now occasionally force a passage; as at Reid's Mistake, at Lake Macquarie, near Newcastle, and at Lake Alexandrina, at Encounter bay. As a general remark, the country east of the Blue mountains, may be said to be of a sandstone formation, and that on the west granitic.

Count Strzelecki, assuming it would appear, that Australia, or at least some portion of it, was elevated by volcanic power, supposes that the incandescent granitic matter was the first to appear, after the breach of the sub-marine crust; that it was on the granitic talus that quartz rock and sienite forced their way to the surface, and that upon the latter rocks serpentine, porphyry, and greenstone made their appearance. Thus about Bathurst, on the Blue mountain range, quartz rock overlaps granite, and on the Honeysuckle range, porphyry overlaps sienite; on Mount Kosciuszko (in the south-west), granite is seen forming a base 2,000 feet above the sea, upon which sienite and quartz rock attain a further elevation of 4,500 feet. There is a want of uniformity in the inclination of the uplifted stratified crust; at Mount Kosciuszko mica slate, and siliceous, and argillaceous slates, are *vertical*, and attain the height of 3,200 feet. At Mane's range, between the rivers Murray and Murrumbidgee, the upheaved strata are nearly horizontal. The stratified rocks occupy a small zone of New South Wales.

Count Strzelecki observes that New South Wales exhibits few records of irruptive igneous rocks, and preserves all its crystalline siliceous rocks, in addition to the sili-

cious sedimentary ones, which in the course of ages have accumulated upon its surface. He states that the stratified rocks from mica slate upwards, reach only to the variegated sandstone inclusively, which sandstone is incumbent on the coal deposits; and that the thickness of these stratified rocks, does not exceed 2,200 feet, of which sandstone constitutes 1,400 feet. The area of the *crystalline*, compared with that of the *sedimentary* rocks, is estimated as three to one; but in Van Diemen's Island as seven to one.

This accurate observer states that in New South Wales, the area of granite, protogene, hyalomictic, quartz rock, sienite, siliceous breccia, quartzose porphyry, siliceous slate, sandstone, and conglomerate, all containing above sixty per cent. of silica, is to the area of eurite, felspathic porphyry, greenstone, and basalt rocks, containing less than sixty per cent., as four to one; but in Van Diemen's Land, on the contrary, the area of the first division is to that of the second as one to three. Of the crystalline rocks, granite, sienite, and quartz, predominate; the greater part of the coast range of mountains, and the elevated terraces or steppes, westward of those mountains, are composed of granite, which is supposed to extend far into the interior of Australia, in masses of mammillary, tuberos, globular, or botryoidal forms. In the country to the north-east of Wellington Valley, these granitic masses present a striking resemblance to those graphically described by Baron Von Humboldt, in his account of the Altai regions. Sir Thomas Mitchell says that quartzose rock, exhibiting a tendency to break into irregular polygons, some of the faces being curved, is "most extensively distributed in the interior of New South Wales."

The sandstone strata extend from the sea coast to the river Nepean, on the west. Throughout this extent of country, the sandstone seems to spread like a level platform, and although the surface rises in hills and ridges, these seem to consist of a mass of clay, the surface of which has been worn into inequalities by the action of water. This circumstance, to some extent, accounts for the singular fact, that in New South Wales, the tops of the hills, which retain most of the original clay, are generally more fertile than the valleys, unless the latter contain alluvial deposits; and it is probably owing to a similar cause, that the valleys are cold and bleak, while the tops of the hills are warm and verdant. This clay is generally at the

surface red, and impregnated with iron; in some places, however, it is white and saponaceous, appearing under the form of pipe-clay, containing frequently calcareous stones resembling stalactites, evidently formed by aqueous deposition; at the depth of a few feet, it generally assumes the appearance of schistus, impregnated with sulphate of alumina, and sulphate of iron. In the ravines are found coal-field schistus, with vegetable impressions; and also argillaceous iron ore.

Westward, or beyond the Nepean river, the sandstone strata are forced upwards, and extend from north to south, forming the lofty ridge of the Blue mountains; towards the north these mountains are sterile and rugged; towards the south, however, the sandstone is in many places covered or displaced by whinstone, which sometimes assumes the form of common, at other times of porphyritic trap. In the latter form it is manifested through the well-watered and fertile county of Argyle.

On advancing further to the south and west, granite and limestone, both foliated and granular, are abundant, perforated in all directions with extensive subterranean caverns, exactly similar, both in character and stalactite decoration, to those found in regions of a similar formation in Europe and in America. But both are frequently met with in detached quantities in the northern and eastern parts of the colony; and a fine limestone formation occurs also to the north-westward of Sydney, at the head of William's river. In some parts of the territory (as in Argyle) the limestone passes into a beautiful close-grained marble, as white as that of Carrara; at Shoalhaven it is jet black, traversed by veins of white calcareous spar; between Wellington Valley and Boree there are innumerable varieties of finely-variegated marbles, all affording materials to numerous skilful artisans. Granular limestone is extensively developed on the Upper and Lower Hunter, between Wellington and Mount Canoblas; between Cullen-bullen and Wolterawang; on the Wollondilly, in Westmoreland, and on the Shoalhaven river. There are varieties of different minerals found in various places; Hunter's river flows for a considerable distance over rocks of jasper, beautiful agates, opal, and chalcedony; innumerable petrifications are, moreover, found on its banks.

Near the burning mountain of Wingen, amorphous specimens of cornelian, white,

pinkish, and blue, have been found; also angular fragments of ribbon and fortification agates, and balls of agate, some of them filled with crystals, varying from the size of a pea to that of a hen's egg; and others of a blueish-white and clouded colour, having spots of white dispersed throughout them. Several of the agates collected from Mount Wingen had their surfaces crested over with iron; some of those found at Mount Agate were crested with native copper, while others from the same locality presented a most beautiful auriferous appearance.

As it is desirable to throw every possible light on the geology of this interesting country, I give the following observations made by Mr. Allan Cunningham, concerning the strata seen to the north and east.

At the Wingen or burning mountain, the summit of the south-eastern side of the dividing range consists of greenstone slate, and the base of a quartzose conglomerate: the low hills, which form the eastern side of Liverpool plains, consist of a similar conglomerate: while the hills to the north of the plains are composed of a very finely-grained granite. Between the latitudes of 31° and 30° , the country gradually ascends from the level of the Liverpool plains, or 840 feet, to nearly 2,000 feet above the level of the sea, and presents a broken irregular surface, often traversed by low ridges of clay slate. To the north of 30° lat. the base of the ridges by which Stoddart's valley is bounded, consists of serpentine, their flanks and summit of hornstone, and the hills at the head of the valley, of clay slate. In the bed of Peel's river, which crosses the northern extremity of the valley, a thin horizontal bed of calcareous sandstone was noticed, between strata of indurated clay or shale. The country for fifty miles to the north of Peel's river exhibits a moderately undulating surface, covered in some parts with fragments of cellular trap; and the hills which bound the route on the westward, as far as the parallel of $29^{\circ} 10'$, consist of a reddish coarse-grained sandstone, in nearly horizontal strata. Beyond this point, towards the north-east, and a little to the north of 29° S. lat., the banks of Mogo creek were found to be composed of a coarse friable sandstone. Pursuing the same direction, the country for forty miles presented a rugged surface, and the prevailing rocks were sandstone and clay slate; but occasionally, the tops of the hills formed low terraces, composed of a quartzose conglomerate. In the bed of a creek in

$28^{\circ} 26'$ S. lat., and in the meridian of Paramatta (151° E. long.), a hard slaty rock was noticed; and the country beyond it was found to be composed, where it could be examined in the dry water-courses, of flinty slate. In $28^{\circ} 13'$ S. lat., a fertile district commences, extending for eighteen miles, or to the foot of the dividing range, in the parallel of 28° . At the base of these mountains, were procured specimens of basalt containing olivine: at the height of 1,877 feet above the level of the sea, the rock consisted of amygdaloid; and the extreme summit, 4,100 feet above Moreton bay, of a brick-red cellular trap, the cells having an elongated form and parallel position.

In 29° S. lat., a deep gorge is composed of clayslate, and traversed by a rapid stream, in the bed of which were noticed large boulders of the grey granite. During the next forty miles, the only rocks noticed were reddish granite, and fragments of basalt. In $29^{\circ} 26'$ S. lat., large masses of a fine quartzose conglomerate occurred, and they were afterwards found to be very generally scattered over the adjacent country. The boundary hills of Wilmot Valley are stated to be a fine-grained gray granite; and those which form the head of it, in $30^{\circ} 11'$ S. lat., of brownish porphyry, containing grains of quartz.

The geology of the country farther north, is equally striking. The western shores of Moreton bay, from the entrance of Pumicestone river, to Red Cliff point, are faced by a reef of considerable breadth, which at low water, is stated by Mr. Cunningham to exhibit a ledge of chalcedony. Pumice-stone has been found on different parts of the east coast of Australia.

In tracing the Brisbane river, which falls into Moreton bay, the first rock observed was talc slate or chlorite; and opposite the settlement, sixteen miles from the mouth of the river, is a quarry of pinkish claystone porphyry, used for building. In the ravines further up serpentine occurs, traversed by veins of asbestos and magnetic iron. Sixty miles from Moreton bay, ledges of hornstone crop out in the banks; and in the same part of the river, a considerable seam of coal appears in its channel. A portion of the stem of a fossil plant, presenting "concentric fibrous bands, and a longitudinal foliated structure at right angles to the bands," was found in the vicinity of the seam of coal. At "the Limestone station," on Bremer River, which falls into the Bris-

bane, were procured a series of specimens, which consisted of yellowish hornstone; indurated white marl, resembling some of the harder varieties of chalk, and containing immense masses of black flint; blueish-grey chalcedony passing into chert; and a gritty yellowish limestone. A bed of coal has likewise been noticed in the Bremer, and traced from it to the Brisbane. To the south of the limestone station is a remarkable hill, consisting of trap, called Mount Forbes; and fifty miles to the south of the penal settlement on the Brisbane, is the Birman range, from which were obtained specimens of compact quartz rock; and from Mount Lindsay, likewise south of the Brisbane, specimens of granite.

The strata in the cliffs, containing the Newcastle coal basin, are stated to be,—coal (the lowest of the deposit), three feet; greenish sandstone, fifty; coal, three; greenish sandstone with blue veins, twenty-five; coal, five; clay rock (greyish), and shale (blueish), with various impressions, forty-three; coal, five; cherts, gritstones, with angular fragments of flint intermixed with thin veins of coal, fourteen; coal three; conglomerate (the uppermost of the deposit), twenty-three; total 204 feet.

The osseous breccia found in the caves at Wellington Valley, have been adverted to in the general view of Australia, at pages 398–9. Their structure appears to indicate that New South Wales has passed through periods of terrestrial revolution precisely similar to those experienced in other parts of the world. The bones found in the caves attest the former existence of animals of whom we have no other record, and also of several similar in species to those now known, but of gigantic size. Immense beds of sea-shells are found at various elevations above the sea; in some places on the tops of hills, in others imbedded in sandstone. Close to the banks of Hunter's river, layers of shells have been found of unexplored depth, and have long been used by the inhabitants in the manufacture of lime. Some of the valleys, such as Dart Brook and Lake George, possess imperfectly fossilised fragments of trees. Elevated beaches in horizontal beds and at various heights are disposed at wide intervals along the coast. At Lake King (Gipp's Land) they are seventy feet above the sea, composed of an indurated reddish clay and calcareous paste, containing *ostrea* and *anomia*, and different from the existing species, which latter are found on

the elevated beaches between Cape Liptrass and Portland bay. Basalt and its varieties occur at Port Stephens, the Upper and Lower Hunter, and other places. The conclusions at which count Strzelecki arrived, after a series of examinations of the coast line of mountains in Eastern Australia, are—that the chain was upheaved during four distinct epochs, to a height varying from 1,000 to 6,500 feet above the sea level; that the upheaving force, arising from volcanic action, was exerted with different degrees of intensity, as shown by the varying heights of the peaks, but that it was uniform in direction, ranging from north-east to south-west; that the lithological character of this chain, and of the spurs which belong to it, is chiefly due to the presence of crystalline rocks, and that the irruption of granite, sienite, hyalomictite, and protogene, took place at the beginning of the first epoch; that of quartz and porphyries during the two first epochs; and that of basalt and its varieties during the last two; the irruption of greenstone continuing during the whole four. From this lithological character, and from the geological phenomena found grouped along its course, this mountain range may be considered as the Australian eastern axis of perturbation.

The *Crystalline and Unstratified Rocks*, mentioned by Strzelecki, as belonging to the first epoch, are granite proper, porphyritic granite, glandular granite, protogene, sienite, hyalomictite, quartz rock, serpentine, and eurate; the *stratified or sedimentary* rocks, are mica slate or schist, silicious slate and argillite. The descriptions by which these several rocks may be known, are stated by the distinguished geologist to whom I am so largely indebted in this section.

Granite Proper.—Composed of equal proportions of quartz, felspar, and mica; structure granular, dissemination of ingredients regular, colour reddish-grey. *Glandular granite*, oval-shaped masses of granular mica, tabular quartz, and tabular felspar, irregularly interspersed through a quartzose paste. *Porphyritic granite*, quartz, and mica, with large oblong and irregular crystals of felspar, confusedly imbedded in the masses. *Protoгене*, a confused crystallization of talc, felspar, and quartz, marked by an unequal distribution of ingredients, and by the entire exclusion of mica. Colour greenish-white, sometimes inclining to red. *Hyalomictite*, a homogeneous, milky, or smoky-looking quartz rock, with an admixture of white

mica, to the entire exclusion of felspar. *Sienite*, a granular and massy structure, invariably composed of a vitreous and translucent quartz, and of hornblende, which is prismatic and of a dark blue green; at times intersected by veins of sulphuret of iron, by which the already beautiful appearance of the rock becomes yet more resplendent; the presence of sienite always indicates the proximity of granite. *Quartz*, in New South Wales, of a whitish or somewhat milky colour, sometimes found translucent and perfectly homogeneous. *Eurite*, composed entirely of felspar, laminated or grained; colour, a pale yellowish-red, inferior in hardness to quartz, adheres to the tongue, and exhales an argillaceous odour. *Serpentine*, colour sometimes emerald, sometimes leek-green, but never uniform throughout; externally it often shines with a resinous lustre, at the edges it is translucent; solid, semi-hard and brittle, fracture earthy, uneven, sometimes laminated, fragments irregular and splintery, feels unctuous; it is traversed by short, curved, and narrow veins of a white silky amianthus, the fibres of which are perpendicular to the direction of the vein.

Mica, or Slate Schist.—According to the varying proportions and the difference of colour of quartz and mica, which, combined, form mica slate, the shades are green, white, red, blue, brown, and yellow; structure laminated. *Siliceous slate*, usually grey, sometimes white, reddish, or yellowish, traversed by numerous veins of quartz, looks greasy, and is tough. *Argillite*, a greyish-black, with a bright silky lustre; substance opaque, with a smooth surface, structure foliated; adheres to the tongue, and yields a strong argillaceous odour: fragments tabular, thin, shining, and friable.

Mount P. P. King, whose summit is 2,646 feet above the sea (see page 393), is described by Mitchell as having at its base, and on its sides, in large masses, the very compact felspathic rock which characterises the valley of the Darling. This, he adds, has been considered a very fine-grained sandstone; but it is evidently an altered rock. Here, in contact with trap, it possessed the same tendency to break into irregular polygons, some of the faces of which were curved; one mass having been so tossed up, that its lower side lay uppermost, inclined at an angle of about 60°. That this is a hypogene rock, sometimes in contact with granite as well as with trap, is evident at Oxley's

Table Land, and other places. (*Tropical Australia.*)

In New South Wales, as in other countries, the rock which forms the basis of the soil may be known from the trees or herbage growing thereon. Thus a dwarfish eucalypti, with glaucous-looking leaves, growing mostly in scrub, indicates a sandstone formation, while open grassy park-like tracts thinly interspersed with lofty eucalypti, characterise the secondary ranges of granite and porphyry. The limestone formation has on its superincumbent soil trees of lofty growth and large size. These marked features will account for the idea expressed by Captain Sturt, that the Australian trees seemed gregarious. In general the covering of sandstone is the common Australian clay, but over whinstone it is invariably a light black mould.

Of the productiveness of the Australian soils, there cannot be a doubt. Many farms have been annually cropped for twenty years without manuring; the eucalypti trees by shedding their bark, annually furnish an ample supply of alkalies to the soil, which has a degree of softness, coherence, and porosity, common to all virgin soils; a low specific gravity, and a proportion of organic to inorganic matter, amounting to a third, and in some instances to a half of the whole quantity. The numerous places where carbonic acid gas escapes through the fissures of the earth in New South Wales, cause many of the rivers, particularly near their source, to be impregnated with this acid, and they are also charged with mineral salts. In frequent instances the waters of the colony pass through calcareous rocks, and carry with them dissolved lime, they are therefore very valuable for irrigation, which may be most extensively and usefully practised in Australia. Any one who has visited Malta, and seen the rich crops produced on an apparent barren sandstone formation, by irrigation, will recognise the great benefit which New South Wales would derive from pursuing the same course.

Mr. J. Pattison, a resident of twelve years' experience in New South Wales, and the author of a recent brochure on its resources and capabilities, says the country is capable of sustaining many millions of people by its agricultural products; for "there is abundance of land of the richest description." Speaking of the qualities of the soil, he says:—"The produce, under a good sys-

tem of husbandry, is enormous, and would stagger the credibility of those who have not been eye-witnesses. The late Dr. Wilson, R.N., obtained, at his estate in the county of Murray, *eighty-five bushels of wheat per acre*; and at Narren Gallen, near Yass, on the estate of Cavan, I have seen 700 bushels reaped from a field of fourteen acres, or equal to *fifty bushels per acre*.”*

Count Strzelecki, after a minute and careful analysis of the soils of New South Wales and Van Diemen's Land, extending over forty soils in quality, furnishes the following as the *mean* of his investigations:—

Quality of Soils	Highest productive power.	Lowest productive power.
PHYSICAL CHARACTER:—		
Absorption of solar rays . . .	+ 13.4	+ 14.21
Emission of heat	— 2.5	— 6.1
Capacity for moisture	+ 8.0	+ 3.6
Specific gravity	1.8	2.04
CHEMICAL CHARACTER:—		
Soluble portions of 100 parts	30.23	8.53
Proximate constituents in 100 parts:		
Vegetable and animal matter	14.70	5.50
Water	7.88	3.71
Silica	54.32	69.99
Alumina	9.82	10.02
Peroxide of iron	3.18	4.48
Carbonate of lime	4.74	4.12
Sulphate of lime	2.33	0.08
Potash and soda	0.74	0.56
Chlorides	traces of	traces of
Magnesia	0.82	0.87
Metallic sulphurets and oxides	0.63	—
Loss	0.84	0.67

The inferences which the analyser draws from these facts are—

1. That both the fertile and the sterile soils absorb on an average nearly the same amount of solar heat; but the fertile soil emits, through terrestrial radiation, an amount of heat two-thirds less than that yielded by the sterile soil.

2. The fertile soil absorbs more than double the quantity of moisture absorbed by the sterile soil.

3. The solubility of both soils in hydrochloric acid is not equal; the fertile soil in 100 parts containing 30 parts of soluble, the sterile soil but eight.

4. The fertile soil possesses nearly three times as much of vegetable and animal matter as the sterile soil.

5. The mineral constituents of each kind

* *New South Wales; its past, present, and future Condition; with Notes upon its Resources and Capabilities.* London, published by Johnson and Hunter, 1849—p. 90.

of soil considered apart from the vegetable matter, the hygrometric water, and the loss in the analysis, and expressed in their atomic weight, are in the—

High productive Soils.

Mineral Constituents	Parts.	Atomic weight.	Proportion in Nos.
Silica	70.93 =	0.122	30
Alumina	12.84 =	0.020	5
Peroxide of iron	4.15 =	0.004	1
Carbonate of lime	6.25 =	0.020	5
Sulphate of lime	3.04 =	0.007	1
Potash and Soda	0.95	—	—
Magnesia	1.00	—	—
Metallic oxides	0.87	—	—

Low productive Soils.

Mineral Constituents.	Parts.	Atomic weight.	Proportion in Nos.
Silica	77.70 =	0.132	26
Alumina	11.11 =	0.017	3
Peroxide of iron	4.94 =	0.005	1
Carbonate of lime	4.57 =	0.014	2
Sulphate of lime	0.08	—	—
Potash and soda	0.56	—	—
Magnesia	0.87	—	—
Metallic oxides	—	—	—

Thus it will be perceived that the fertile soils differ from the sterile, not only in the number of constituents, but in the proportion in which they are found to be combined. The productive quality of soils is influenced by the amount of absorption and emission of solar heat; when the proportion of absorption to emission is 5.76 : 1, it is highly favourable to agriculture; whenever it is 2.35 : 1, it is highly injurious. The extent of capacity of absorbing moisture is of course an important element in the successful prosecution of husbandry. The more or less soluble constituents determines the productive power of soils; as respects Australia, those that have thirty per cent. of soluble matter are best adapted for the former; those which have only eight are the least. The amount of vegetable matter in a soil appears to regulate the proportionate power of absorbing and of emitting heat, and of absorbing and of retaining atmospheric moisture. The importance of manuring, or, in other words, of feeding soils with the vegetable and other ingredients necessary for the food of plants, is therefore obvious; and some Australian cultivators now find their lands, after twenty years' successive cropping, without food or rest, reduced to the exhausted condition of an overworked animal, deprived of its sustenance and sleep.

The average production of wheat in Australia, on good soils, is from twenty to thirty bushels per acre, weighing from sixty to sixty-five pounds the bushel; in some districts forty and even fifty bushels have been obtained from an acre of land. Maize yields forty to seventy bushels nett, according to the quality of the soil, and the carefulness of the culture. The potato gives two crops in the year, and green peas are gathered in winter as well as in summer.

MINERALOGY.—New South Wales abounds with mineralogical treasures; gold, copper, and steel have been found, but the most useful discovery yet made is coal, which exists in several districts, but especially in the country south of Hunter's river, which is an extensive coal-field, and where, as previously stated, the sea cliffs present a most interesting section of this stratum. The seams of coal are distinctly visible on the abrupt face of the cliffs, forming the south headland of the harbour of Newcastle, and may be traced for nine miles, when they abruptly terminate, suddenly bending downwards, and sinking below the level of the sea. From this place a long sandy beach and low land extend to the entrance of Lake Macquarie (Reid's Mistake), the south head of which rises into high cliffs, in which the coal strata again present themselves. Between the coal beds are strata of sandstone, and beds of clay slate, with vegetable impressions—sometimes, but more rarely, indurated claystone. Embedded in these strata, there is abundance of argillaceous iron ore; this is occasionally cellular and in layers, but for the most part it appears in the form of petrifications of trees and branches, irregularly dispersed. The coal is decidedly of vegetable origin, the fibre of the wood being often quite distinct, while the vegetable impressions in the clay slate, under and over the coal, are singularly beautiful; some of these subterranean plants appear to have been in full flower, so that a skilful botanist might ascertain even their species; and Mr. Berry thought he could distinctly ascertain the leaf of the *lamia spiralis*.

About three miles along the south coast of Newcastle, in an upright position at high-water mark, under the cliff and beneath a bed of coal, there was recently found the butt of a petrified tree, which, on being broken, presented a deep black appearance, as if passing into jet; and on the top of the cliff at Newcastle, embedded at about a foot

beneath the surface, lying in a horizontal position, and nearly at right angles to the strata of the cliff, the trunk of another tree was found, finely grained, both specimens being traversed by thin veins of chalcedony. In the alternating strata of the coal, which runs generally in three parallel horizontal beds, are found nodules of clay, ironstone, and trunks and stems of arundinaceous plants in ironstone; in one place a narrow bed of ironstone, bearing impressions of leaves, is remarkable; while thin laminae of the same mineral, the surface of which is traversed by square and variously shaped sections of the same, are seen on several parts of the shore, both in the face of the cliff parallel with the beds of coal, and extending into the sea, forming the strand at low water. Nor are these indications confined to the district of the sea-shore at Newcastle; thin beds of coal and iron may be seen along the banks of the Paramatta river, and in other places. Coal abounds in the vicinity of the burning Mount Wingen, and near the Kingdon chain of ponds, also at Moreton Bay.

The Newcastle (New South Wales) coal, analysed by count Strzelecki, gave—(one description)—charcoal, 62.8; bitumen, 25.2; earthy matter, 25.2. One pound of coal yielded one foot 1.806 cubic inches of illuminating unpurified gas. The gaseous mixture contained in 100 volumes, was—sulphuretted hydrogen, 10; carbonic acid, 10; olefiant gas, 17; carburetted hydrogen, 11; other inflammable gas, 52. Every 100 parts in weight, yielded—coke, 71.2; coal tar and ammoniacal liquor, 15.6; ultimate elements, deducting the earthy matter, carbon, 70.5; hydrogen, 20.4; nitrogen, 9.1. This coal burns easily, with a reddish flame, swells and agglutinates. It is of a black colour, even fracture, foliated structure, soft, and brittle; specific gravity, 1.31. The quality of this coal is about equal to the English Newcastle coal, it is now being extensively raised by the Australian Agricultural Company, who have a lease of the mines. A seam has been recently found ten feet thick; and there are, probably, other large outcrops of coal in the adjacent districts.

Copper ore of very rich quality, is found in great abundance; in the districts of Wellington the beds of ore are supposed to extend for miles in every direction, and according to the *Hawkesbury Courier*, "a high hill in the neighbourhood presents indications of being a solid mass of metal." The

Molong Mining Company are raising large quantities of ore for shipment to England; there is a rich vein of copper near Bathurst.

Iron abounds in various parts of the colony, and most of the smaller streams are impregnated with iron. A few miles north by west of Mount Wingen, are stumps of trees standing upright in the ground, apparently petrified, and strongly impregnated with iron.

It has been before stated, that in the neighbourhood of Camden, a mine has been opened where *steel*, according to Mr. Pattison, "is dug from the earth with little boring and of endless extent." He adds, that he saw a very handsome knife, made from the metal which had been worked without any overground preparation, by a Sydney cutler, as a present for the governor, Sir Charles Fitzroy; the handle being of native tortoiseshell, with a plate of native gold.

Gold, most probably, exists in large quantities. Sir Thomas Mitchell, during his recent visit to England, showed me beautiful specimens of gold embedded in white quartz, and stated that it was also obtainable in grains or pieces of considerable extent. He discovered the gold region while exploring the interior, and observed, that he was unwilling to notify the region, lest the colonists should leave their flocks and herds to go in search of gold. Many years since, that distinguished geologist, Sir Roderick Murchison predicted that gold would be extensively found in Australia, by reason of its geological formation, and the latitudinal direction of its mountain range; for it is a singular fact, that the gold districts yet discovered are in mountains, with a latitudinal rather than a meridional direction; to which it may be added, that the perturbing subterranean forces of the earth, as manifested in the Rocky mountains, the Andes, the Himalaya, or from Kamtskatka to Borneo, have a general axis from north to south.

CLIMATE.—The seasons of New South Wales are the opposite of those of England, January being the middle of summer, and July of winter. The summer extends from the first of November to the first of March; the spring and autumn are brief, but well defined; the winter of a bracing coolness, with occasional frosts at Sydney, and snow in the interior. The spring months are September, October, and November; the summer, December, January, and February; autumn, March, April, and May; winter, June, July, and August. March, April, and

August are generally considered the rainy months. The average temperature of spring is $65^{\circ} 5'$, of summer 72° , of autumn 66° , and of winter 55° . The barometrical pressure is about 29.94319 inches, and the average of the thermometer 64° Fahr. In Sydney, the thermometer is rarely below 40° ; in Paramatta, it is frequently down to 27° in winter; and in my garden at Paramatta I have on a winter morning eaten frozen milk beneath an orange tree, from which I gathered the ripe and ripening fruit. Indeed, there is every variety of climate; by proceeding to the Blue mountains a cold winter may be enjoyed, or at Moreton Bay a warm one. Of course, as the land rises above the level of the ocean, a difference of temperature is felt; the winter at Bathurst, where the luxury of snow is in its season enjoyed, being much colder than on the sea shore. Of the peculiarly salubrious climate of Australia I can gratefully bear record, having proceeded to Van Diemen's Island and New South Wales, from the east coast of Africa, while suffering from a severe fever, acquired while exploring the rivers and country adjacent to Mozambique; and in a few months the fever and its distressing consequences entirely disappeared. The air is remarkably elastic; old persons arriving in the Australian colonies from Europe, find much of the hilarity of youth restored to them. Not more than five or six sick persons will be found in a community of twelve or fifteen hundred; at some of the military stations seven years have elapsed without the loss of a man; several colonists are stated to be upwards of 100 years of age; I saw one woman who was said to be 125 years of age; and the singularly horny texture of her skin seemed to confirm the almost incredible statement, yet she went about her daily work at a road-side inn. In New South Wales, during summer, I frequently slept in the open air, without the slightest injurious consequences; and during the expeditions of Mitchell, Sturt, Leichardt, Eyre, and other explorers, they lived for months without any other canopy than the clear blue Australian sky; and notwithstanding scanty and innutritious or saline food, they enjoyed wonderfully good health, such as they could not probably have maintained under similar circumstances in any part of the world. It is said to be owing to the fineness of the climate that dogs do not go mad in Australia, that horses are seldom or never known to kick, that herds of wild cattle have a degree of

THERMOMETER, BAROMETER, AND HYGROMETER AT N. S. WALES. 505

tameness unknown on the Pampas of South America, and that the descendants of Europeans are remarkable for an equanimity of temper, which is probably partly attributable to the salubrity of the climate.

The following table exhibits the range of the barometer and thermometer for each month in the year, the state of the hygrometer, and the prevailing winds, and weather at Sydney:—

Months.	Barometer, 62 feet above the sea.		Hygrometer.		Radiator.		Thermometer.			Winds.	Weather.				
	Maximum.	Minimum.	Max.	Min.	Max.	Min.	Max.	Med.	Min.		Days Fine.	Days Rain.	Stormy.	Cloudy.	Stormy and Cloudy.
Jan. .	30.300	29.430	68	9	101	63	91	75 $\frac{1}{2}$	60	S.S.E.	15	4	12	—	—
Feb. .	30.300	29.680	75	35	94	48	90	74	58	E.S.E.	20	4	5	—	—
March	30.490	29.580	74	10	83	42	83	71 $\frac{1}{2}$	60	E.	19	10	2	—	—
April.	30.458	27.772	78	40	87	53	83	70	57	W.	21	6	—	3	—
May .	30.442	29.602	79	26	66	35	73	61 $\frac{1}{2}$	50	W.	23	3	—	5	—
June .	30.350	29.290	78	25	67	32	62	52	42	S.W.	20	1	—	9	—
July .	30.315	29.840	76	27	59	26	60	54	48	S.W.	17	8	5	—	1
Aug. .	30.248	29.488	78	29	67	31	66	55	44	S.W.	14	9	7	—	1
Sept. .	30.380	29.520	79	18	83	34	67	49 $\frac{1}{2}$	42	N.E.	20	—	8	—	2
Oct. .	30.200	29.300	80	20	86	42	82	69 $\frac{1}{2}$	57	N.E.	21	3	5	—	2
Nov. .	30.220	29.860	76	10	84	51	91	74	57	E.&W.	31	—	—	—	—
Dec. .	30.110	29.530	72	30	96	59	87	75	63	N.E.	20	—	10	—	1
Year .	30.490	29.290	80	9	101	26	91	—	28	—	241	48	54	17	7

According to a meteorological register kept for five years, at the south head of Port Jackson, a naked sandstone cliff, exposed to high calorific effects from solar radiation, the *extreme* range of the barometer was 1.140 inch, and its *mean* range 1.0594 inch, or, in round numbers, about one inch to one-sixteenth. The same general law which influences the barometer in Europe, operates in Australia; the mercury rises with the polar and falls with the equatorial wind; i.e., in Europe a northerly wind would cause an elevation of the barometer; in Australia a southerly wind produces the same effect, in both hemispheres an equatorial wind would cause a fall.

The annual *mean* of the external shade of the barometer at the same place, was—

	1840.	1841.	1842.	1843.	1844.
For the year.	63.186	64.656	62.72	62.73	61.49
April . . .	67.23	67.66	61.46	63.62	60.31
October . .	68.16	62.76	63.47	61.07	61.12
Summer . .	—	—	68.390	67.987	66.731
Winter . .	—	—	57.055	57.473	56.245
Difference.	—	—	11.335	10.514	10.486

Note.—April corresponds to mid-autumn in England, October to mid-spring.

Annual Mean Temperature at Port Jackson.

Years.	Summer.	Winter.	Difference.
1842	68.390	57.055	11.335
1843	67.987	57.473	10.514
1844	66.731	56.245	10.486

Sydney (Port Jackson) may be compared with a port to the northward and another to the southward, thus—

Thermometrical Range.	Port Macquarie, Lat. 31° 25'.	Port Jackson, Lat. 33° 51'.	Port Phillip, Lat. 38° 18'.
Summer:—			
Maximum . .	88.3	81.9	90.6
Minimum . .	61.8	59.0	48.8
Fluctuation . .	26.5	29.9	41.8
Mean	75.0	73.9	69.4
Winter:—			
Maximum . .	75.3	73.3	69.8
Minimum . .	46.8	45.3	36.9
Fluctuation . .	28.5	28.0	32.9
Mean	61.0	59.3	53.3
Annual Mean . .	68.0	66.6	61.3
Annual Fluctuation	27.5	28.2	37.3
Warmest Month .	Nov.	Nov.	Nov.
Coldest Month . .	August	July	July

The registers from which the above are taken were kept for the three years ending with 1842. It will be observed that the highest annual fluctuation of the three stations is at Port Phillip, viz., 37.3; but at Quebec it is, 59; at St. Petersburg, 57; at New York, 55; Buda, 44; at Warsaw, 43.2; at Philadelphia, 43.3; at Vienna, 43; Copenhagen and Zurich, 38.9; Milan, 38.4.

In the southern hemisphere snow is perpetual at 6,000 feet above the sea, in Europe at 10,000 feet. This may be partly attributed to the great extent of ocean in the south, and the absence of any intervening

land between the south pole and Australia, whereby there is at least a difference of five degrees of latitude in regard to temperature. Considerable allowance must also be made for the direction, intensity, and thermometrical condition of different currents of air. Thus, in ascending Mount Kosciuszko, in the Australian Alps, Count Strzelecki found the stratum of air at 3,000 feet much colder than that at the elevation of 6,500 feet. So also at Mount Roa (Sandwich Islands) three different currents were noted; one at Byron's bay, light from the S.E., temperature 86°; one at an elevation of 4,000 feet, strong from the westward, temperature 55°; and one at 6,000 feet, brisk N.W., temperature 67°. A hail storm on Ben Lomond in Van Diemen's Land was observed to originate in a stratum of air far below the point of congelation, and moving between an elevation of 800 and 5,000 feet, i.e., between Ben Lomond, in a temperature of 56°, and the Vale of Avoca, 4,200 feet lower down in 80°. This storm was succeeded by a polar wind. At the Cordilleras in Chili snow has been found melting at 15,000 feet elevation, while it was unaltered at 10,000 feet. So also rain sometimes falls in Australia when the temperature near the earth is below the freezing point. My own theory of these phenomena is that heat is produced by the electricity emanating from the sun, and the magnetism contained in the earth being brought into contact; the sun itself being not a body of fire, but an evolver of the electric fluid, which on being poured *perpendicularly* on the earth, elicits terrestrial magnetism, and heat is the product. Hence, at a certain distance from the earth, even within the torrid zone, there is no caloric, but a region of perpetual snow, as intensely cold as at the arctic circle, where also the rays of the sun fall only obliquely, and not *direct*.

It is probably this constant evolvment of heat from the surface of the earth, which causes the unceasing oscillations of the atmospheric currents, not only affected by the increasing or decreasing declination of the sun, but also by a different cause, i.e., an upper current of cold air, descending to one of warmer temperature nearer to the earth, it displaces, and is in its turn displaced when the oxygenized or electric matter with which it was charged has been expended in the support of animal and vegetable life.

Rain.—The quantity which falls in Australia is considerable; the following shows

the total quantities registered as fallen, with the respective number of days, at South Head, Port Jackson, 240 feet above the mean tide level:—

Year.	Number of Inches.	Number of Days.
1840 (9 months) .	49.65	108
1841	76.31	142
1842	48.32	137
1843	62.78	168
1844	70.67	157
Total . . .	307.73	712

out of, and comprehending a period of four years and nine months = 1,736 days.

Two extraordinary falls of rain have occurred during this period, viz., one of 20.12 inches, on 29th April, 1841, during heavy squalls from E.N.E.—E.S.E.; the other, 20.41 inches, on 15th October, 1844, wind between S.E. and S.W.

Strzelecki gives the annexed return for New South Wales and Van Diemen's Island, which includes 8,730 days of observation, brought to the term of averages for every season at each station:—

Station.	Summer.	Winter	Annual Quantity.	Average number of inches.
New South Wales:				
Port Macquarie .	37.58	25.10	62.68	} 48.60
Port Jackson . .	24.42	28.00	52.42	
Port Phillip . .	13.25	17.47	30.72	
Van Diemen's Island:				
Woolnorth . . .	19.68	29.07	43.75	} 41.28
Circular Head . .	11.31	24.11	35.42	
Port Arthur . .	16.94	17.75	44.69	

Rain sometimes pours down in continuous torrents in Australia; one fall, during twenty-four hours, at Port Jackson, amounted to twenty-five inches. Mitchell, Sturt, and other explorers found marks of extraordinary floods in the Nammoy and other rivers; ten to fifteen feet above the ordinary level of a river is not an unusual height during a season of rain. The above record of rain annually falling, will dissipate a prevailing idea that but little moisture exists in Australia; the average annual fall in London, is 22.19 inches, in New South Wales, 48 inches; in Van Diemen's Island, 41 inches per annum.

It must, however, be admitted, that with a comparatively high temperature and thirsty soil, Australia requires a far larger amount of moisture than England, and that the effect is more beneficial with a smaller quantity, in the

latter-named country, than that derived from a larger quantity in the former region. At Port Macquarie, where the heat of summer is intense, more rain falls during that season (thirty-seven inches), than in the whole year at Port Phillip (thirty inches), where the climate is less torrid, and the land less exposed to the parching effects of the hot winds. It may be, also, that there is a greater amount of absorption of solar rays, and radiation, or emission of heat, in New South Wales—in some parts of Australia—than in others; for it is stated by Strzelecki, that on some soils all the early crops are invariably injured by the frost, while on other soils such injury never takes place.

The prevailing directions of the winds at Sydney are thus indicated:—

Wind's Direction.	Morning.	Noon.	Evening.
North	4	7	23
North-north-east . . .	—	11	11
North-east	12	129	109
East-north-east	—	11	5
East	4	3	8
East-south-east	1	2	5
South-east	9	45	70
South-south-east	8	27	13
South by East	1	5	4
South	29	31	15
South by West	3	2	4
South-south-west	8	11	8
South-west	109	35	45
West-south-west	42	5	3
West by South	4	2	1
West	118	10	8
West by North	2	—	—
West-north-west	6	2	3
North-west	4	16	19
North-north-west	1	8	5
North by West	—	—	2

During the summer months a regular sea breeze sets in daily, and refreshes the inhabitants along the coast. The direction, humidity, and siccidity of the winds in Australia, are, doubtless, influenced by the general laws which govern the atmospheric circulation; but these laws are modified by various local circumstances, such as the extent and form of the island-continent, and the vastness of the surrounding ocean. Winds from the northerly and southerly quarters are the most numerous; in winter, on an average of 100 winds, 60 proceed from the southerly quarter, making the proportion of the polar to the equatorial, as 3:1; in summer, of 100 winds, 42 are from the northerly quarter—polar to equatorial, 1:2. These proportions vary at Port Phillip and other stations owing, probably, to the posi-

tion and configuration of the land. At Port Jackson the winter is marked by the prevalence of polar winds, and the summer by that of equatorial; at Port Phillip, the equatorial prevail in winter, and the polar in summer; and in Van Diemen's Island the equatorial winds prevail during both summer and winter.

The *hot winds* of Australia have engaged the attention of geologists, as well as of meteorologists; they are supposed to originate in the central deserts. The intense heat of these winds raises the thermometer, in the shade, to 117°, or even 120°, Fahr.; the grass becomes dry, like hay; the fig is destroyed; the red and blue grape lose their colour and watery elements; green leaves lose their colour, turn yellow, and wither; and the promising harvest of the agriculturalist is frequently ruined. Westward of the Blue mountain range, the temperature of a summer day is increased by this wind 40°; on the eastward of the range, from 25° to 30°. The effects of this wind on the animal frame, are stated, on the authority of captain Sturt. I have, however, myself, ridden for the greater part of the day, in New South Wales, during the prevalence of these siroccos, and felt less fatigue than from a slight exertion during the rainy season in Bengal. In the latter instance, the atmosphere was saturated with moisture; in the former, the air was totally deprived of all humidity. Count Strzelecki experienced the hot wind with great violence sixty miles at sea, in the parallel of Sydney, and found the sails of the ship covered with an impalpable sand, containing one-fourth of aluminous and three-fourths of silicious and metallic matter; he also experienced it at the top of Ben Lomond, at an elevation of 5,000 feet, but did not feel it at 3,000 feet lower, to the windward. It does not appear that this current of heated air is confined to any particular altitude, but rushes from a lower to a higher stratum of air, according to circumstances. Not unfrequently, during the prevalence of this wind, the high clouds, cirrus, and strata, at once disappear, while the lower remain unchanged; I noticed, also, that at night the air was filled with what is termed "sheet lightning," which exhibited sometimes the beautiful coruscations of the aurora borealis.

The mean direction of this wind in New South Wales is from the north-west, and its velocity sometimes exceeds a regular gale; occasionally it has a *ricochet* movement,

thus—

or appears produced by a rotation on a set of horizontal axes, thus—



There are no noxious gases in these hot winds, and they do not exercise any deleterious effect on the health of man: they bear some affinity to the hot winds experienced in the Mediterranean, in Egypt, Arabia, Persia, Bombay, and Mexico; but whether these all belong to a common system

of atmospheric circulation, or are caused in the several countries by local circumstances, it is not easy to decide authoritatively; and my own impression is, that the form, extent, and latitude of the regions where they prevail—the characteristics of the soil, and the quantity and nature of the vegetation, all exercise a powerful influence in the production of hot winds during summer.

A good idea of the climate of Australia may be formed from the following comparison:—

Station	Summer.	Winter.	Annual Mean.	Thermometrical Fluctuation.
Port Macquarie, classed with	Florence, Naples	Funchal	Tunis	Dublin.
Port Jackson, ditto	Avignon, Constantinople, Philadelphia, U.S.	Cairo	Messina	Paris.
Port Phillip, ditto	Baden, Marseilles, and Bordeaux	Palermo	Naples	Montpellier.

The summer represents that of western Europe, between 41° and 55° N. lat; the winter, that part of the Mediterranean between the coasts of Spain, Italy, France, and Algiers, extending to Tunis and Cairo. It is probable that the extension of cultivation, the pernicious custom adopted by Europeans, of burning the surface of the land, to obtain a new crop of grasses, and the extensive forest conflagrations caused by the carelessness of the aborigines in scattering fire, or by the friction of dry trees, have contributed to increase the mean annual temperature of Australia since its colonization.

Rapid growth, and early development of the intellectual as well as physical structure, characterize human life in New South Wales, especially among females. At fifteen, a girl possesses all the charms, and many of the graces, of womanhood; but it must be admitted, that at the age of thirty, her bloom has passed away, although the vigour of existence is unimpaired. The springs of life seem to attain a rejuvenescence in those arriving from Europe. Numerous instances occur of persons arriving in the colony at sixty, and upwards, who acquired new vigour, and attained a hundred years of age.

Although we are still ignorant of the almost recondite laws which govern the increase or decrease of life, I cannot but consider that the progressive augmentation of female over male births, the lesser proportion of female to male deaths, and the annually decreasing mortality of both sexes, as positive and convincing proofs of the adaptation of a climate for the dwelling-place of man. On this subject various

data will be found in the chapter on population. Between 1836 and 1846, the proportion of females to males had more than doubled. In the year 1844, the net increase of female births over the year 1843, was 7.81 per cent.; that of males, only 2.88 per cent. This indicates a *positive* increase. The *comparative* mortality is equally remarkable. In 1844, the deaths of *males*, in proportion to the whole male population, was one in 78; of *females*, only one in 89.24. In proportion to the births of males, the deaths of males was one in 3.62; whilst those of females was only one in 5.2. In 1844, the deaths were in the ratio of 32 to 100 births: in 1844, 27 deaths to 100 births. The relative annual mortality in New South Wales, from 1828 to 1840, one in 55.15: in 1841, one in 62.36: in 1842, one in 58.85: in 1843, one in 73.19: in 1844, one in 81.98. The average mortality in England is about one in 53. According to the official returns, the mortality of the colony has undergone an actual and relative decrease since 1842.

The proportions of the births to the deaths is very remarkable; there is not *one death to three births*; in England there are two deaths to three births.

According to the registered returns, which are not very perfect, the numbers of births in New South Wales were in the following proportions to the numbers of deaths:—

1846	332	} Births to 100 deaths.
1847	331	
1848	341	

In England, the proportion of births to deaths is not more than half of this.

The proportion of births and deaths throughout the year, to the whole population living at the end of it, was :—

In 1846, 36 births, 11 deaths)	} To 1,000 living.
1847, 43 „ 13 „	
1848, 40 „ 12 „	

In England, the births have averaged 32, and the deaths 22, to 1,000 living.

The rate of mortality in 1848 was 1 in 85. In England it is 1 in 47; in Canada, 1 in 49; in the United States, 1 in 37.

Colonel Tulloch, who has registered many valuable observations, connected with the health and duration of life at the different stations of the British army, informs me that he considers the salubrity of Australia quite on a par with that of the United Kingdom. For instance, the mortality of troops serving in the various garrisons of Great Britain and Ireland is about one-and-a-half per cent annually; and the casualties of every denomination of a regiment of the line, from the period of its embarkation from England, and during the whole of its service in the widely scattered posts of Australia, Van Diemen's Island, and New Zealand, is no more than one-and-a-half per cent. It may on these grounds be said that the mortality is less in Australia than in England.

I have been favoured by Colonel Tulloch with the following comparative statements of the mortality among the British troops serving in different parts of the empire. This table shews a great saving of life, during the last ten years. Other circumstances as well as climate, have their influence on the duration of the life of soldiers, such as the locality of the barracks, the employment of the troops, and the congregating of men in large masses.

Average Mortality per thousand of White Troops annually.

Colonies.	For 20 yrs. ending in 1836.	For 10 yrs. ending in 1846.
New South Wales	14	11
Windward and Leeward Islands	78 ⁷ / ₁₀	68 ⁷ / ₁₀
Jamaica	121 ¹ / ₁₀	66 ¹ / ₁₀
Gibraltar	21 ¹ / ₁₀	10 ² / ₁₀
Malta	16 ¹ / ₁₀	14 ² / ₁₀
Ionian Islands	25 ¹ / ₁₀	15 ¹ / ₁₀
Bermudas	28 ¹ / ₁₀	29 ¹ / ₁₀
Nova Scotia and New Brunswick	14 ¹ / ₁₀	13
Canada	16 ¹ / ₁₀	12 ⁶ / ₁₀
Newfoundland	14	9 ¹ / ₁₀
St. Helena	34 ¹ / ₁₀	15 ¹ / ₁₀
Cape of Good Hope	13 ¹ / ₁₀	13
Mauritius	27 ¹ / ₁₀	24 ¹ / ₁₀
Ceylon	69 ¹ / ₁₀	41 ¹ / ₁₀

In the year 1849 the ratio of mortality among the white troops in our different colonies, was as follows :—

In Australia, 8; British Guiana, 14.2; Trinidad, 33; Tobago, 98.6; Grenada, 12.3; St. Vincent's, 6 Barbadoes, 128.8; St. Lucia, 17.4; Dominica, 40.4; Antigua, 10.9; St. Kitt's, 19.4; Windward and Leeward combined, 68.4; Jamaica, 48.3; Gibraltar, 8.4; Malta, 30.1; Ionian Islands, 23.1; Bermuda, 8.4; Newfoundland, 10.3; Nova Scotia and New Brunswick, 19.7; Canada, 15.6; St. Helena, 8.4; Cape of Good Hope, 13.3; the Mauritius, 14.6; Ceylon, 21.5; Madras, 22.4; Bengal, 61.3; Bombay, 26.6.

Comparing the foregoing mortality with that of the troops in the United Kingdom, the superiority of the Australian climate will be manifest :—

Average Mortality per thousand of Troops employed.

United Kingdom.	For 7 years previous to 1836.	For 10 yrs. ending in 1846.
Household Cavalry	14 ¹ / ₁₀	11 ¹ / ₁₀
Dragoon Guards and Dragoons	14 ¹ / ₁₀	13 ¹ / ₁₀
Foot Guards	21 ⁶ / ₁₀	20 ¹ / ₁₀
Regiments of the Line	18 ¹ / ₁₀	17 ² / ₁₀

The maladies to which flesh is heir assume a milder type in Australia than in Europe; and it cannot be said that there are any endemic complaints. The diseases most prevalent in the six principal gaols of the colony in 1848, were—those of the brain and nerves, 75; circulatory organs, 20; respiratory organs, 154; alimentary canal, 282; hepatic, 9; eyes, 63; skin, 35; cellular texture, 28; fevers, 10; rheumatic, 84; dropsy, 1; scorbutic, 31; ulcers, 85; pregnancy and parturition, 6; wounds and accidents, 36; hernia, 1; teeth, 11; vermin, 25; other diseases, 119; children, 31. Total, 1,158. The deaths during the year were—males, 13; females, 1. Total, 14. I venture to say, that in none of the hospitals attached to any of the gaols or poor-houses in England, would 1,158 cases of disease similar to the above be treated so successfully. No cases of Asiatic cholera have occurred in Australia. Different forms of mania have presented themselves within the last few years, and the malady is increasing in New South Wales.

It would be very desirable if the excellent hospitals which exist at Sydney, Paramatta, and other towns, would publish periodical statements of the number and description of the different diseases treated, and of the mortality in each establishment. This would form a striking corroborative proof of the remarkable salubrity of the Australian climate.

CHAPTER III.

POPULATION OF NEW SOUTH WALES—FREE AND BOND, PROGRESSIVE AUGMENTATION SINCE 1788, STATE OF RELIGION, EDUCATION, AND CRIME.

THIS territory, when first occupied by the British, on the 26th January, 1788, was thinly peopled by a dark-coloured race of aboriginal tribes, whose appearance, character, manners, and customs will be described in a subsequent portion of this work. In the present chapter, therefore, attention will be directed to the numbers and condition of the Anglo-Saxon Australians in New South Wales.

The six transports which sailed from England, 13th May, 1787, for the foundation of the colony of New South Wales, contained the embryo from which the present population of the province, aided by immigration, has been formed. The transport, *Alexander*, contained 210 men convicts; the *Scarborough*, 210 ditto; the *Friendship*, 80 men, and 24 women, convicts; the *Charlotte*, 100 men, and 24 women, convicts; the *Prince of Wales*, 100; and the *Lady Penrhyn*, 102 women convicts. Total, 608 male, and 250 female convicts. Two convicts on board the *Alexander* received a pardon before sailing. The grand total which sailed was stated to be 828. A guard of marines was placed on board of each ship, and numbered, with officers, 212. There were twenty-eight women—wives of marines (who were to form the garrison of the new colony), carrying with them seventeen children. Emigration from England was studiously discouraged for several years; but owing to the number of convicts sent out, and the fineness of the climate, the population rapidly increased. According to a parliamentary return of 1812, the state of the colony in 1810 was—(1). Civil department, victualled, men, 37; women, 1; children, 3: (2). Military department, men, 1,416; women, 219; children, 414: (3). Free persons, victualled, men, 307; women, 183; children, 198: (4). Prisoners, victualled from the public stores, men, 1,132; women, 151; children, 154:—total number victualled from public stores, 4,277: (5). People *not* victualled from public stores, men, 1,906; women, 1,644; children, 1,938: settlers *not* victualled from public stores, men, 715; women, 22. Total number of souls in the settlement, 10,452.

The early censuses are said to be incomplete. The increase has been as follows:—

Year.	Population.	Year.	Population.
1788	1,030	1833	60,861
1810	10,452	1836	77,096
1821	29,783	1841	120,856
1828	36,598	1846	154,534

The estimate to 31st December, 1848, is 220,474. The number of inhabitants, (including the Port Phillip district,) may now be quoted, in round numbers, at a quarter of a million.

In a return laid before the Legislative Council of New South Wales by the able colonial secretary, Mr. Deas Thompson, on the 12th June, 1849, and by Mr. Mansfield's analysis of the census of 1841, the increase of the population, male and female, since 1821, is thus shewn:—

Years.	Adults.		Children.	Total.
	Males.	Females.		
1821	21,693	8,090	Not separated.	29,783
1828	27,611	8,987		36,598
1833	44,688	16,173		60,861
1836	87,298	43,558		130,856
1839	63,784	21,998	28,604	114,386
1840	70,021	25,476	33,966	129,463
1841	75,474	33,546	40,649	149,669
1842	76,528	35,762	47,599	159,889
1843	76,147	35,474	53,920	165,541
1844	74,912	36,170	62,295	173,377
1845	74,951	36,223	70,382	181,556
1846	82,847	42,287	71,570	196,704
1847	83,572	41,809	79,628	205,009
1848	86,302	44,562	89,610	220,474

The progressive augmentation of the female population will be perceived from the foregoing table; this did not arise solely from female emigration, but from the large proportion of female to male births—a proportion which I observed in Australia pervaded the whole range of domestic animals. It seems to be a law of population, that where there is room in a new country, and the command to "increase and multiply" is not perverted by polygamy, there is always a larger proportion of *female* than male births; but in an old established country, fully peopled, a check is put to an injurious increase by a

greater proportion of male than female births. Under a system of slavery there is also a preponderance of male over female births; from which it naturally results that a slave or bond population, if unrecruited by fresh supplies, would in process of time become extinct.

What proportion of the population of New South Wales consisted of convicts and of their descendants it is not possible to state. The number of convicts annually sent from Great Britain to New South Wales, from 1787 to 1843, was—

Years.	Males.	Females.	Total.
1787	184	100	284
1789	994	245	1,239
1791	2,121	286	2,407
1792	314	54	368
1793	1	—	1
1794	35	59	94
1795	1	131	132
1796	206	—	206
1797	313	67	380
1798	395	—	395
1799	—	53	53
1800	503	90	593
1801	203	94	297
1802	543	130	673
1803	494	136	630
1805	1	118	119
1806	272	34	306
1807	189	113	302
1808	202	175	377
1809	200	62	262
1810	200	120	320
1811	400	99	499
1812	400	167	567
1813	500	119	619
1814	500	232	1,032
1815	693	101	794
1816	1,186	101	1,287
1817	1,040	101	1,141
1818	1,912	128	2,040
1819	1,421	148	1,569
1820	1,726	121	1,847
1821	946	171	1,117
1822	856	57	913
1823	491	119	610
1824	1,004	81	1,085
1825	602	59	661
1826	844	88	932
1827	1,401	260	1,661
1828	1,732	298	2,030
1829	2,278	220	2,498
1830	1,751	337	2,088
1831	1,605	250	1,855
1832	1,992	206	2,198
1833	2,310	420	2,730
1834	2,336	144	2,480
1835	2,146	258	2,444
1836	2,029	259	2,088
1837	1,734	140	1,874
1838	1,716	344	2,060
1839	1,096	143	1,239
1840	575	213	788
1843	199	—	199
Total ...	47,092	7,491	54,383

It appears that during a period of forty-eight years the number of convicts sent to New South Wales was, of males 43,506, of females 6,791: total 50,297. This is exclusive of convicts sent to Van Diemen's Island, to which separate transportation commenced in 1817, and from that year to 1837 the number of convicts sent to that island was, males 24,785, females 2,974: total 27,759; making a grand total deported to Australasia during the period, of males 68,291, females 9,765 = 78,056.

Transportation to New South Wales, except the deportation of a few exiles from Pentonville and other places, ceased in the year 1839, and the total number of convicts transported to that settlement may be stated in round numbers at, males 52,000, females 8,706 = 60,706. The convict population is thus stated since 1820:—

Years.	Males.	Females.	Total.
1820	18,067	2,189	20,256
1833	21,845	2,698	24,543
1836	25,254	2,577	27,831
1841	23,844	3,133	26,977
1846	9,653	902	10,555

The proportion of free to bond population, of each sex and age, in the colony is thus shewn in 1828 and 1833:—

Census.	Free Males.			Male Convicts.	Free Females.			Female Convicts.
	Above 12 Years.	Under 12 Years.	Total		Above 12 Years.	Under 12 Years.	Total	
1828	10621	2835	13456	1415	4538	2936	7474	1513
1833	17542	5256	22798	21845	8522	4931	13453	2698

In 1834 the number of "emancipists" in the colony was about 16,000, and the remainder of the free population was about 21,000.

The country to which the several convicts belonged, is not stated for the entire period. From 1828 to 1836, those from Great Britain and Ireland were:—

	Males.	Females.	Total.
Great Britain . .	17,876	2,194	20,070
Ireland	8,079	1,941	10,020

During the eight years ending 1836, the number of persons free by servitude was, males 7,788, females 1,363 = 9,151. Absolutely pardoned, males 62, females 2 = 68. Conditionally pardoned, males 543, females 22 = 565.

The following abstracts of the population on the 2nd March, 1846, in each of the Counties and Commissioners' Districts comprised within the Sydney or Middle District, shows the number of free and bond persons

of each sex, distinguishing those born in the colony, or arrived free from other places, and also the number of bond persons holding tickets of leave, in government employment, and in private assignment respectively:—

Counties in New South Wales.	Males Free.		Males Bond.			Females Free		Females Bond.			Totals.		
	Born in the Colony or arrived free.	Other free Persons.	Holding Tickets of Leave.	In Government Employment.	In private Assignment.	Born in the Colony or arrived free.	Other free Persons.	Holding Tickets of Leave.	In Government Employment.	In private Assignment.	Males	Females.	General Total.
Argyle	1758	852	412	2	15	1650	200	16	—	6	3039	1872	4911
Bathurst	1555	899	306	15	24	1418	148	18	2	6	2799	1592	4391
Bligh	186	139	92	1	2	160	17	1	—	—	420	178	598
Brisbane	488	278	153	1	16	430	37	2	—	1	936	470	1406
Camden	3347	1125	448	10	22	3081	251	25	—	14	4952	3371	8323
Cook	1282	570	128	137	5	1316	142	11	1	6	2122	1476	3598
Cumberland	32348	5345	1180	1138	231	30764	1957	209	234	132	40242	33296	73538
Durham	3112	916	409	2	31	2869	180	26	—	9	4470	3084	7554
Georgiana	325	239	60	—	13	285	31	—	—	—	637	316	953
Gloucester	1040	232	187	—	33	864	37	4	—	2	1492	907	2399
Hunter	466	186	41	1	1	453	39	3	—	—	695	495	1190
King	572	372	119	—	4	524	71	1	—	2	1067	598	1665
Macquarie	535	217	219	294	62	580	53	10	—	3	1327	646	1973
Murray	992	513	289	1	8	814	89	14	—	1	1803	918	2721
Northumberland	5036	1720	597	338	59	5035	473	62	1	14	7750	5585	13335
Phillip	229	143	54	—	0	179	27	1	—	2	432	209	641
Roxburgh	859	466	177	—	2	746	88	12	—	3	1504	849	2353
St. Vincent	748	340	186	—	34	744	41	8	—	1	1308	794	2102
Wellington	315	288	100	—	8	225	27	7	—	—	711	259	970
Westmoreland	597	322	72	1	3	519	54	6	—	1	995	580	1575
Stanley (Moreton Bay)	716	190	128	81	7	455	20	1	—	1	1122	477	1599
Auckland (Twofold Bay)	480	217	54	—	2	304	28	2	—	1	753	335	1088
Total	56986	15569	5411	2022	588	53415	4010	439	238	205	80576	58307	138883
Commissioners' Districts beyond the Limits of Location.													
Bligh	250	287	71	2	5	166	6	1	—	—	615	173	788
Clarence River	541	242	71	—	15	337	18	1	—	—	869	356	1225
Darling Downs	245	236	64	4	3	100	4	—	—	2	552	106	658
Lachlan	799	583	176	2	9	577	50	2	—	—	1569	629	2198
Liverpool Plains	670	813	261	6	28	296	32	3	—	1	1778	332	2110
McLeay River	144	99	71	6	20	111	12	1	—	2	340	126	466
Menaroo	767	447	104	7	6	554	32	4	—	5	1321	595	1916
Moreton Bay	87	95	39	—	3	42	2	—	—	—	224	44	268
Murrumbidgee	1003	648	160	1	8	717	52	2	—	1	1820	772	2592
New England	707	691	339	4	15	428	44	3	—	—	1756	475	2231
Wellington	373	464	119	2	11	205	23	1	—	1	969	230	1199
Total	5576	4605	1475	34	123	3533	275	18	—	12	11813	3838	15651
Total Population of the Middle District	62562	20174	6886	2056	711	56948	4285	457	238	217	92389	62145	154534

It will be perceived from the foregoing, that the free males born in the colony, or who have arrived free, are nearly equal in number to the same class of females—viz., 62,562 and 56,948; but that great disproportion of sex exists between the emancipist class—viz., 20,174 males to 4,285 females; also between the bond—viz., 9,653 males, and 912 females.

The total males to females in the colony, in 1846, was 92,389 males to 62,145 females. This difference is every year diminishing: and the laudable efforts of the Right. Hon. Sydney Herbert to afford to distressed sempstresses, and other impoverished women, a means of emigrating to Australia, must eventually benefit the colony. Whatever doubts may

be cast on this benevolent project, I have no fear that injury can accrue from the measure; for it is well known, generally speaking, that as men find in New South Wales "honesty is the best policy," so also women, removed from the snares of vice and temptations which beset them at every step in England, find in New South Wales, that "virtue is its own reward;" and there are many instances of thorough reclamation of character in Australia of persons who, if they had remained at home, would have trodden with fearful rapidity the downward road to ruin.

The census of 1846, presents within the limits of location, the following comparison with those of 1841, 1836, and 1833:—

Counties.	1846.	1841.	1836.	1833.
Argyle	4911	3397	2417	2850
Bathurst	4391	2465	1729	3454
Bligh	598	546	376	..
Brisbane	1406	1560	1378	229
Camden	8323	6286	3161	2648
Cook	3598	2892	2052	1465
Cumberland	73538	58108	39797	35844
Durham	7554	6238	3208	3303
Georgiana	953	749	575	..
Gloucester	2399	1424	854	583
Hunter	1190	999	808	..
King	1665	598	544	..
Macquarie	1973	2409	1300	744
Murray	2721	2111	1728	510
Northumberland	13325	9975	5016	4606
Phillip	641	453	247	..
Roxburgh	3353	1520	1980	..
St. Vincent	2120	1762	592	445
Wellington	970	510	530	1903
Westmoreland	1575	619	579	1903
Stanley (Moreton Bay, &c.)	1599	2187	3858	1218
Auckland (Twofold Bay)	1088	..	..	..
Total	139891	106808	72,729	59,802

The census of 2nd March, 1846, of the Commissioners' Districts beyond the limits of location, presents the following comparison with those of 1841, 1836, and 1833:—

Districts.	1846.	1841.	1836.	1833.
Bligh	788	No details.	No details.	Not occupied.
Clarence River	1225			
Darling Downs	658			
Lachlan	2198			
Liverpool Plains	2110			
M'Leay River	466			
Monaroo	1916			
Moreton Bay	268			
Murrumbidgee	2592	No details.	No details.	Not occupied.
New England	2231			
Wellington	1199			
Total	15651	9980	2008	—

The gross increase of population during the five years ending March, 1846, was, males, 27,471; females, 31,282 = 58,753. Increase per cent, during the same period, males, 31.46; females, 71.84 = 44.89. Centesimal proportion of the sexes:—in 1846, males, 60.53; females, 39.47 = 100; in 1841, males, 66.71; females, 33.29 = 100. The inequality of the sexes is undergoing a gradual correction. The proportion of females to 100 males was—1836, 30; in 1841, 50; in 1842, 59; in 1843, 60; in 1844, 63.

The number of free immigrants who arrived in New South Wales and Port Phillip since the formation of the colony is not ascertainable. Between 1828 and 1848, the numbers are imperfectly stated thus:—

Years.	Men.	Women.	Children.	Total.
1828	200	122	274	596
1829	306	133	145	564
1830	166	70	73	309
1831	189	98	174	457
1832	819	706	481	2,006
1833	838	1,146	701	2,685
1834	571	596	397	1,564
1835	551	644	233	1,428
1836	524	807	290	1,621
1837	1,769	1,138	1,365	4,275
1838	3,631	2,152	3,077	8,840
1839	5,843	3,719	3,796	13,358
1840	5,159	5,457	2,056	12,662
1841	—	—	—	—
1842	—	—	—	6,823
1843	—	—	—	2,558
1844	—	—	—	2,181
1845	—	—	—	496
1846	—	—	—	111
1847	—	—	—	6,563
1848	—	—	—	13,977

Between 1841 and 1847, viz., for seven years the immigrants who arrived in New South Wales, consisted of 9,210 English, 2,606 Scotch, and 20,896 Irish = 32,709. No emigrants were sent out to New South Wales, by her Majesty's Emigration Commissioners from 1844 to 1846.

The census of the province taken on 2nd March, 1846, affords satisfactory evidence of the progress and position of the colonists, and furnishes an excellent basis for the statistical supplement which it is my intention to issue every seven years, in order that the value of the original work may be preserved unimpaired. The following details, when examined with the accompanying map, will, doubtless, prove interesting in this country to those who have friends and relatives in the colony.

514 POPULATION BY SEX AND AGE IN NEW SOUTH WALES—1846.

Convicts free by servitude, absolutely and conditionally pardoned, during 1847 and 1848.

Years.	Absolutely pardoned.			Conditionally pardoned.			Free by servitude.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
1847	2	0	2	1,020	33	1,053	588	215	503
1848	6	1	7	2,226	66	2,292	275	77	352
Total.	8	1	9	3,246	99	3,345	863	292	1155

On the 2nd March, 1846, the total bond, or convict, population in the colony, was 10,565. During 1847 and 1848 there were freed 4,509, or more than 2,250 per annum. Allowing 2,000 for the number liberated during ten months of 1846, the total libera-

tions to the end of 1848 would be about 6,500, which, at that period, would leave 4,000 still in bond—a number that would be entirely obliterated in the years 1849 and 1850—when the whole population of the province would be free.

Number of Persons of each Sex and Age, in the Counties in the Sydney or Middle District, and in the Commissioners' Districts beyond the limits of Location, in 1846.

Counties.	Males.					Females.					Totals.		General Total.
	Under 7 Years.	7 and under 14.	14 and under 21.	21 and under 45.	45 and upwards.	Under 7 Years.	7 and under 14.	14 and under 21.	21 and under 45.	45 and upwards.	Males.	Females.	
Argyle	621	251	159	1587	421	620	220	153	755	124	3039	1872	4911
Bathurst	480	224	142	1624	329	516	211	128	655	82	2799	1592	4391
Bligh	59	22	11	295	35	54	23	13	81	7	420	178	598
Brisbane	169	46	30	595	96	175	49	27	203	16	936	470	1406
Camden	1088	585	356	2181	742	1103	506	312	1200	250	4952	3371	8323
Cook	413	272	168	868	401	454	271	147	468	136	2122	1476	3598
Cumberland	8617	4744	3135	18096	5650	8599	4717	3975	13430	2575	40242	33296	73538
Durham	1045	472	307	2157	489	1124	417	223	1148	172	4470	3084	7554
Georgiana	98	59	31	358	91	111	43	25	118	19	637	316	953
Gloucester	324	169	118	744	137	300	140	94	315	58	1492	907	2399
Hunter	143	84	64	267	137	163	94	45	156	37	695	495	1190
King	206	95	67	547	152	206	76	53	233	30	1067	598	1665
Macquarie	197	84	58	700	288	229	87	52	243	15	1327	646	1973
Murray	337	132	112	985	237	286	134	63	376	59	1803	918	2721
Northumberland	1719	881	509	3726	915	1761	862	517	2113	332	7750	5585	13335
Phillip	71	28	15	265	53	77	22	17	87	11	432	209	641
Roxburgh	294	127	72	789	222	262	119	93	319	56	1504	849	2353
St. Vincent	226	116	78	695	193	259	114	67	293	61	1308	794	2102
Wellington	91	26	17	469	108	86	26	18	111	18	711	259	970
Westmoreland	199	112	58	511	115	200	87	35	219	39	995	580	1575
Stanley, Moreton Bay	167	70	36	755	94	151	53	27	230	16	1122	477	1599
Auckland, Twofold Bay	143	49	34	446	81	97	43	18	130	47	753	335	1088
Total	16707	8648	5575	38660	10986	16833	8314	6102	22883	4175	80576	58307	138883
Commissioners' Districts, beyond the Limits of Location.													
Bligh	56	23	14	458	64	63	25	11	71	11	615	173	788
Clarence River	118	47	34	598	72	114	40	29	167	6	869	356	1225
Darling Downs	32	8	19	436	57	38	6	13	44	5	552	106	658
Lachlan	235	107	77	983	167	222	77	45	261	24	1569	629	2198
Liverpool Plains	117	55	77	1358	171	115	28	21	158	10	1778	332	2110
M'Leay River	37	10	21	225	47	41	13	11	60	1	340	126	466
Menaroo	222	82	93	765	159	202	78	44	233	38	1321	595	1916
Moreton Bay	11	2	6	191	14	17	1	1	25	—	224	44	268
Murrumbidgee	266	110	78	1175	181	250	100	69	335	28	1820	772	2592
New England	163	86	70	1273	164	152	55	37	216	15	1756	475	2231
Wellington	103	30	22	689	125	87	25	8	108	2	969	230	1199
Total	1370	560	511	8151	1221	1301	438	284	1678	137	11813	3838	15651
Total Population of Middle District, }	18077	9208	6086	46811	9572	18134	8752	6386	24561	4312	92389	62145	154534

Number of Married and Single Persons of each Sex in the Counties in the Sydney or Middle District, and in the Commissioners' Districts beyond the limits of Location in 1846 :—

Counties.	Males.		Females.		Totals.		General Total
	Married.	Single.	Married.	Single.	Males.	Females.	
Argyle	823	2,216	822	1,050	3,039	1,872	4,911
Bathurst	648	2,151	674	918	2,799	1,592	4,391
Bligh	86	334	86	92	420	178	598
Brisbane	218	718	217	253	936	470	1,406
Camden	1,424	3,528	1,369	2,002	4,952	3,371	8,323
Cook	555	1,567	530	946	2,122	1,476	3,598
Cumberland	13,090	27,152	13,319	19,977	40,242	33,296	73,538
Durham	1,260	3,210	1,256	1,828	4,470	3,084	7,554
Georgiana	124	513	130	186	637	316	953
Gloucester	370	1,122	352	555	1,492	907	2,399
Hunter	179	516	190	305	695	495	1,190
King	267	800	258	340	1,067	598	1,665
Macquarie	314	1,013	251	395	1,327	646	1,973
Murray	409	1,394	403	515	1,803	918	2,721
Northumberland	2,330	5,420	2,271	3,314	7,750	5,585	13,335
Phillip	96	336	93	116	432	209	641
Roxburgh	359	1,145	352	497	1,504	849	2,353
St. Vincent	348	960	336	458	1,308	794	2,102
Wellington	134	577	132	127	711	259	970
Westmoreland	249	746	248	332	995	580	1,575
Stanley (Moreton Bay)	251	871	237	240	1,122	477	1,599
Auckland (Twofold Bay)	185	568	173	162	753	335	1,088
Total	23,719	56,857	23,699	34,608	80,576	58,307	138,883
Commissioners' Districts beyond the limits of Location.							
Bligh	84	531	78	115	615	173	788
Clarence River	188	681	169	187	869	356	1,225
Darling Downs	55	484	55	51	552	106	658
Lachlan	309	1,260	292	337	1,569	629	2,198
Liverpool Plains	184	1,594	170	162	1,778	332	2,110
M'Leay River	67	273	61	65	340	126	466
Menaroo	250	1,071	259	336	1,321	595	1,916
Moreton Bay	21	203	23	21	224	44	268
Murrumbidgee	334	1,486	342	430	1,820	772	2,592
New England	226	1,530	223	252	1,756	475	2,231
Wellington	123	846	113	117	969	230	1,199
Total	1,854	9,959	1,785	2,053	11,813	3,838	15,651
Total Population of Middle District	25,573	66,816	25,484	36,661	92,389	62,145	154,534

Number of Married and Unmarried Persons in the City of Sydney and its Suburbs.

Name of City and Suburb.	County in which situated.	Males.		Females.		Totals.		General Total.
		Married.	Single.	Married.	Single.	Males.	Females.	
City of Sydney . . .	Cumberland . .	7,072	13,738	7,208	10,340	20,810	17,548	38,358
Balmain* . . .	Ditto . .	247	435	255	400	682	655	1,337
Camperdown* . .	Ditto . .	50	75	52	64	125	116	241
Canterbury* . .	Ditto . .	43	85	43	47	128	90	218
Chippendale* . .	Ditto . .	85	134	88	109	219	197	416
Glebe, the* . .	Ditto . .	210	323	212	310	533	522	1,055
Newtown* . .	Ditto . .	257	374	252	332	631	584	1,215
O'Connell Town* .	Ditto . .	8	17	8	7	25	15	40
Paddington* . .	Ditto . .	172	250	179	225	422	404	826
Redfern* . .	Ditto . .	177	260	183	245	437	428	865
St. Leonard's*† .	Ditto . .	74	149	74	115	223	189	412
Surry Hills* . .	Ditto . .	33	88	33	53	121	82	207
Total		8,428	15,928	8,587	12,247	24,356	20,834	45,190

Note.—The mark (*) attached to the name of any suburb indicates that it is situated on private property. This mark (†) includes the inhabitants of the Government Township of St. Leonard's, as well as the residents on the adjoining suburbs.

Number of Married and Unmarried Persons in the several Towns and Villages in New South Wales.

Name of Town or Village.	County in which situated.	Males.		Females.		Totals.		General Total.
		Married.	Single.	Married.	Single.	Males.	Females.	
Ailsa	Bligh	3	2	4	4	5	8	13
Albury	Unnam'd	11	32	11	11	43	22	65
Appin	Cumberland	20	47	19	39	67	58	125
Bathurst	Bathurst	303	800	320	460	1,103	780	1,883
Berrima	Camden	79	178	54	66	257	120	377
Boyd*	Auckland	27	65	23	10	92	33	125
Braidwood	St. Vincent	40	79	40	47	119	87	206
Brisbane, North	Stanley	109	296	101	108	405	209	614
Brisbane, South	Ditto	70	139	67	70	209	137	346
Broulee	St. Vincent	3	6	3	10	9	13	22
Bungendore	Murray	4	15	4	7	19	11	30
Bungonia	Argyle	20	33	19	26	53	45	98
Camden*	Camden	40	100	40	62	140	102	242
Campbelltown	Cumberland	91	204	89	157	295	246	641
Carcoar	Bathurst	15	28	16	14	43	30	73
Clarence Town	Durham	14	36	14	29	50	43	93
Dalkeith*	Bligh	7	26	7	9	33	16	49
Dungog	Durham	22	47	21	34	69	55	124
Eden	Auckland	10	30	10	18	40	23	63
Gosford	Northumberland	10	25	11	7	35	18	53
Goulburn	Argyle	218	468	220	285	686	485	1,171
Gundagai	Unnam'd	16	39	15	17	55	32	87
Gunning	King	20	40	20	15	60	35	95
Hartley	Cook	11	20	11	20	31	31	62
Haydonston*	Brisbane	17	57	21	22	74	43	117
Ipswich	Stanley	20	44	19	20	64	39	103
Kelso*	Roxburg	85	173	85	121	258	206	464
Liverpool	Cumberland	115	247	90	149	362	239	501
Macquarie	Macquarie	144	455	79	141	599	220	819
Maitland, East	Northumberland	152	337	150	271	489	421	910
Maitland, West*	Ditto	433	917	442	617	1,350	1,059	2,409
Merriwa	Brisbane	5	24	8	5	29	13	42
Montefiores*	Bligh	25	47	28	29	72	67	129
Morpeth*	Northumberland	120	214	125	176	334	301	635
Mudgee	Wellington	22	68	22	19	90	41	131
Murrurundi	Brisbane	11	24	9	■	35	17	52
Muswellbrook	Durham	42	81	40	45	123	85	208
Narellan	Cumberland	4	4	2	■	8	6	14
Newcastle	Northumberland	248	769	192	262	1,017	454	1,471
Nurea	Unnam'd	9	14	10	11	23	21	44
Parramatta	Cumberland	612	1,649	787	1,406	2,261	2,193	4,454
Paterson	Durham	23	51	23	44	74	67	141
Penrith*	Cumberland	56	115	52	68	171	120	291
Petersham*	Ditto	23	43	22	34	66	56	122
Pictou	Camden	24	48	23	25	72	48	120
Pitt Town	Cumberland	35	74	37	83	109	120	229
Queanbeyan	Murray	40	88	35	45	128	80	208
Raymond Terrace	Gloucester	45	100	44	74	145	118	263
Richmond	Cumberland	122	277	128	219	399	347	746
Seone	Brisbane	22	47	21	27	69	48	117
Singleton*	Northumberland	109	200	116	140	309	256	565
St. Alban's	Ditto	4	4	4	9	8	13	21
St. Aubin's*	Brisbane	27	30	22	24	57	46	103
Stockton*	Gloucester	18	48	18	28	66	46	112
Windsor	Cumberland	248	682	268	481	930	749	1,679
Wollombi	Northumberland	16	25	15	20	41	235	76
Wollongong	Camden	86	201	90	138	287	228	515
Yass	Murray and King	46	124	50	54	170	104	274
Total Population in Country Towns		4,171	10,036	4,216	6,319	14,207	10,535	24,742
Add City of Sydney and Suburbs .		8,428	15,928	8,587	12,247	24,356	20,834	45,190
Total Urban Pop. in N. S. Wales .		12,599	25,964	12,803	18,566	38,563	31,369	69,932

Note.—This mark (*) attached to the name of any suburb, town, or village, indicates that it is situated on private property

BIRTHS, DEATHS, AND MARRIAGES IN NEW SOUTH WALES. 517

Statement, showing the Increase of the Population by Births and Immigration respectively, in each year, from 1839 to 1848.

Years.	Gross Increase.		Total.	Gross Decrease.		Net Increase.	Population.
	Births.	Immigration.		Deaths.	Departures.		
1836	—	—	—	—	—	—	77,096
1837	2,270	7,700	9,970	1,799	—	8,171	85,267
1838	2,836	11,913	14,749	2,104	—	12,645	97,912
1839	3,304	15,651	18,955	2,481	—	16,474	114,386
1840	4,233	13,226	17,459	2,382	—	15,077	129,463
1841	5,204	19,938	25,142	2,894	2,998	19,250	149,669
1842	6,333	11,649	17,982	2,717	5,045	10,220	159,889
1843	7,182	5,493	12,675	2,293	4,730	5,652	165,541
1844	7,946	8,809	16,755	2,122	5,054	9,581	173,377
1845	8,522	5,968	14,490	2,128	4,183	8,179	181,556
1846	7,061	6,673	13,734	2,125	4,514	6,339	196,704
1847	8,881	6,563	15,444	2,688	4,474	8,282	204,986
1848	8,746	13,977	22,723	2,574	4,751	7,235	205,009
1849							
1850							

Marriages, Births, and Deaths, in New South Wales, since 1832.

Years.	Marriages.	Births.		Total.	Deaths.		Total.
		Males.	Fem.		Males.	Fem.	
1832	619	655	599	1,254	650	275	880
1833	698	769	791	1,560	850	345	1,150
1834	750	927	930	1,857	827	337	1,164
1835	744	931	872	1,830	990	463	1,453
1836	774	1,047	1,073	2,120	1,131	497	1,628
1837	915	1,159	1,111	2,270	1,217	582	1,799
1838	970	1,450	1,386	2,836	1,392	712	2,144
1839	1,157	1,678	1,626	3,304	1,609	872	2,481
1840	1,531	2,119	2,114	4,233	1,517	865	2,382
1841	1,924	2,631	2,573	5,204	1,750	1,144	2,894
1842	2,564	3,160	3,173	6,333	1,753	964	2,717
1843	1,831	3,689	3,493	7,182	1,446	847	2,293
1844	1,813	3,999	3,947	7,946	1,362	760	2,122
1845	1,837	4,338	4,184	8,522	1,245	883	2,128
1846	1,796	3,529	3,532	7,061	1,321	804	2,125
1847	1,852	4,536	4,345	8,881	1,646	1,042	2,688
1848	1,801	4,484	4,262	8,746	1,584	900	2,574
1849							
1850							
Total	23,677	41,101	40,011	81,139	22,290	12,382	34,622

By the last census of 1846, the population of New South Wales and of Port Phillip, was as follows:—

	Males.	Females.	Total.
<i>Within limits of Location—</i>			
Middle District	80,576	58,307	138,883
Port Phillip District	13,234	10,234	23,468
<i>Beyond limits of Location—</i>			
Middle District	11,813	3,838	15,651
Port Phillip District	6,950	2,461	9,411
Crews of colonial vessels	2,196	—	2,196
Total	114,769	78,840	189,609
Population of 1841	87,298	43,558	130,856
Increase	27,471	31,282	58,753
<i>Centesimal increase during the same period</i>			
Average annual centesimal increase for same period	31.46	71.81	44.89
Centesimal proportion of 1846 the sexes 1841	60.53	39.47	100
	66.71	33.29	100

From the 1st January to 31st December, 1848, the two districts of New South Wales and Port Phillip presented the following results:—

	Male.	Female.	Total.
<i>Increase by—</i>			
Immigration	8,452	5,525	13,977
Births	4,484	4,262	8,746
Total increase	12,936	9,787	22,723
<i>Decrease by—</i>			
Deaths	1,584	990	2,574
Departures	3,534	1,217	4,751
Total decrease	5,118	2,207	7,325
<i>Summary—</i>			
Total increase	12,936	9,787	22,723
Total decrease	5,118	2,207	7,325
Net increase	7,816	7,580	15,396
Population, Dec. 31, 1847	123,890	81,119	205,009
„ Dec. 31, 1848	131,708	88,699	220,407

According to the census of 1846, the classification of occupations showed—commerce, trade, and manufactures, 9,264; agriculturists, 13,952; grazing shepherds, 13,565; stockmen, &c., 5,532; horticulture, 943; other labourers, 12,104; mechanics and artisans, 10,769; domestic servants, males, 4,181, females, 6,455; clerical profession, 185; legal, &c., 271; medical, 343; other educated persons, 1,737; alms-people, pensioners, paupers, &c., 1,687; all other occupations, 7,816; residue of population, 98,602 = 187,413.

The places where born were thus noted:—In the colony, males, 27,361; females, 27,492:

England, males, 33,756; females, 13,493: Wales, males, 364; females, 177: Ireland, males, 22,445; females, 15,976: Scotland, males, 6,409; females, 3,970: other British dominions, males, 1,153; females, 752: foreign countries, males, 901; females, 285.

The dwellings of the inhabitants were thus classified in 1846:—Houses of stone or brick, 9,955; wood, 16,511; shingled, 17,012; slated, 500. Total, 26,563. Inhabited, 24,848. Of the latter, the county of Cumberland, containing Sydney, has 12,939 houses.

RELIGION.—According to the census of 1836, there were—of Protestants, 77,096; of Roman Catholics, 21,898; Jews, 477. Judge Burton states, that in 1836, among the convicts, 18,500 were Protestants, 9,000 Roman Catholics, and 331 Jews. In 1846,

the religious denominations of the inhabitants of New South Wales, alone, was:—Church of England, 79,801; Church of Scotland, 16,053; Wesleyans, 6,338; other Protestants, 3,681; Roman Catholics, 47,187; Jews, 969; Mahomedans and Pagans, 135; other persons, 361. For the year ending 31st December, 1848, there were:—

Religious Denominations.	Births.	Marriages.	Deaths.
Church of England	3,790	720	1,405
Church of Scotland	930	504	225
Wesleyan Methodists	483	77	81
Independents	85	27	29
Baptists	32	5	8
Roman Catholics	3,387	462	812
Jews	39	6	14
Totals	8,746	1,801	2,574

Persons of each of the under-mentioned Religious Denominations, on 2nd March, 1846.

Counties.	Church of England.	Church of Scotland.	Wesleyan Methodists.	Other Protestants.	Roman Catholics.	Jews.	Mahomedans and Pagans.	Other Persuasions.	General Total.
Argyle	2,334	622	64	26	1,797	59	2	7	4,911
Bathurst	2,013	466	380	40	1,464	23	4	1	4,391
Bligh	297	48	—	7	245	—	—	1	598
Brisbane	792	170	—	7	426	1	2	—	1,406
Camden	4,250	1,007	321	62	2,629	24	19	11	8,323
Cook	2,074	272	183	10	1,036	12	6	5	3,598
Cumberland	38,344	6,458	3,696	2,857	21,216	688	32	247	73,538
Durham	3,867	1,417	313	76	1,862	10	2	7	7,554
Georgiana	448	136	5	3	361	—	—	—	953
Gloucester	1,396	387	99	14	500	1	2	—	2,399
Hunter	783	64	40	1	299	—	—	1	1,190
King	821	89	10	14	730	1	—	—	1,665
Macquarie	1,136	222	43	27	519	20	3	3	1,973
Murray	1,290	328	4	26	1,043	24	4	2	2,721
Northumberland	6,849	1,301	817	152	4,117	53	—	38	13,335
Phillip	356	88	2	—	191	1	3	—	641
Roxburgh	1,231	311	64	28	717	1	1	—	2,353
St. Vincent	943	377	5	6	766	3	1	1	2,102
Wellington	590	61	9	4	305	—	—	1	970
Westmoreland	619	144	136	3	672	1	—	—	1,575
Stanley, Moreton Bay	770	209	24	57	497	—	22	11	1,599
Auckland, Twofold Bay	577	152	5	19	328	5	—	1	1,088
Total	71,780	14,329	6,229	3,439	41,720	938	111	337	138,883
Commissioners' Districts beyond the Limits of Location.									
Bligh	368	165	—	1	243	1	2	2	768
Clarence River	760	119	15	15	300	2	12	2	1,225
Darling Downs	341	128	—	2	178	1	—	2	658
Lachlan	956	190	14	21	1,010	6	1	—	2,198
Liverpool Plains	1,175	188	10	106	625	2	—	4	2,110
McLeay River	303	26	2	1	127	1	—	—	466
Monaroo	899	194	10	15	784	13	—	1	1,916
Moreton Bay	111	58	2	2	95	—	—	—	268
Murrumbidgee	1,401	218	29	46	893	3	—	2	2,592
New England	1,147	326	17	30	703	—	3	5	2,231
Wellington	569	112	4	3	509	2	—	—	1,199
Total	8,030	1,724	109	242	5,467	31	24	24	15,651
Total Pop. of New South Wales	79,810	16,053	6,338	3,681	47,187	969	135	361	154,534

The ecclesiastical establishment for 1848 was: *Church of England*—Diocese of Sydney, forty-two rectors or ministers, with salaries averaging £200 per annum, and, in almost every instance, a parsonage (or an allowance of £50 a-year), and also a glebe of forty acres.

Diocese of Newcastle.—Sixteen rectors or ministers, with salaries and allowances as in the Sydney diocese. There are two ministers beyond the settled districts, with £200 a-year each.

Church of Scotland.—Seventeen ministers, with salaries averaging £150 a-year each, and, in several instances, a house and glebe.

Wesleyan.—Nine ministers, with each £150 or £200 a-year, and a house. No glebe.

Independent.—Five ministers; salary, £170 to £250; in one instance a house and glebe.

Baptist.—One minister; salary, £250.

Church of Rome.—Twenty-five ministers of religion, with salaries averaging £200 a-year, and, in some instances, a house, but no glebes.

Jews.—One minister; salary, £100 per annum.

There are now nine Episcopalian Lutheran churches in and near Sydney, two Presbyterian, one Free Church, one Wesleyan, one Baptist, one Congregational, one Friends (Quakers), one Bethel Mariners, four Roman Catholic chapels, and one Jewish synagogue. There are ministers of the Established Church at Paramatta, Hunter's hill, Prospect, Liverpool, Marsfield, Campbelltown, Narellan and Cabramatta, Camden, Mulgoa, Windsor, Richmond, Pitt Town and Wilberforce, Penrith, Castlereagh, Berrima, Hawkesbury, Goulbourn, Yass, Braidwood, Bathurst, Illawarra, Newcastle, Maitland, Port Macquarie, Wellington, Seaham, Marengo, New England, and sixteen other places.

Expense of Ecclesiastical Establishment in 1848.

Denominations.	Paid from Colonial Treasury.		Paid from Military Chest for Convict Service.	Total.
	Salaries.	Churches etc.		
	£	£	£	£
Church of England	15,204	3,726	655	19,585
Presbyterian . . .	2,614	400	25	3,039
Wesleyan . . .	862			862
Roman Catholics .	6,670	3,388	66	10,124
Grand Total . .	25,552	7,514	746	33,610

EDUCATION is in progress, and much needed. According to the census of 1846, there were

then, under twenty-one years of age, who could not read, males, 18,568; females, 18,035: read only, males, 5,480; females, 6,159: read and write, males, 9,323; females, 9,078. Above twenty-one years of age, cannot read, males, 14,245; females, 7,160; read only, males, 7,150; females, 6,209; read and write, males, 37,623; females, 15,504.

Public or Free Schools in 1848.

Denomination.	Number of Schools.	Scholars.		
		Male.	Female.	Total.
Church of England—				
• Orphan Schools . . .	2	96	110	206
• Schools established prior to 1837 . . .	32	1,566	1,259	2,825
+ Ditto according to regulation of 1841 . . .	35	1,462	1,230	2,672
+ Presbyterian . . .	43	1,471	1,134	2,605
+ Wesleyan . . .	16	196	527	723
Roman Catholic—				
• Orphan Institution . . .	1	61	73	134
• Schools prior to 1847 . . .	11	541	550	1,091
+ According to regulation of Sept. 1841 . . .	21	917	792	1,709
Totals . .	161	6,310	5,675	11,985

Note.—The Schools marked thus (*) are supported by Government, and those marked thus (+) by Government and Voluntary Contributions.

There is a Sydney College with eighty students; a grammar school with forty-two scholars, and a "King's school," Paramatta, with thirty-six scholars. Of private schools, there are in Sydney district 223, with 3,510 males and 3,208 female scholars=6,718.

The total sums paid from the Colonial treasury in 1848, for education in New South Wales (including the Port Phillip district), was £13,540.

THE PRESS.—About twelve newspapers and periodicals. These publications are well conducted, and exhibit a liberal spirit and talent equal to the provincial press of any portion of the United Kingdom. The *Sydney Herald*, *Chronicle*, *Colonist*, and *Gazette*, are published three times a-week; the *Monitor*, six times a week; the *Commercial Journal*, twice, and the government *Gazette*, once a-week. There is an excellent subscription library and reading-room, at Sydney; an Australian museum and botanic garden, a Floral and Horticultural Society, and a Mechanics' School of Arts. There are agricultural societies in different parts of the colony; also reading-rooms and libraries; and in no part of the British Empire is there a greater desire for the extension of education, and the acquiring of useful information.

CRIME.—In the section on transportation I have adverted to the fearful neglect of the home and local government, from 1788 to 1836, of the spiritual wants of the many thousand criminals deported during that period from the United Kingdom to Australia. At New South Wales, at Van Diemen's Land, and at Norfolk Island, crime had reached its highest pitch about the years 1835–6. Extreme severity towards the prisoners, a neglect of the ordinances of religion, the flooding of the colony with criminals, without a due admixture of a free and untainted population, and the absence of any other mode of punishment in New South Wales for felons convicted there, except by deporting them to an earthly pandemonium at Norfolk Island, had produced a dreadful amount of sin in New South Wales. The Rev. Mr. M'Encroe, who attended seventy-four executions in New South Wales in four years, stated, that the greater number of the criminals, on their way to the scaffold, "thanked God that they were not going to Norfolk Island." Several of the prisoners there committed suicide, rather than live among the demons in human form by whom they were surrounded.

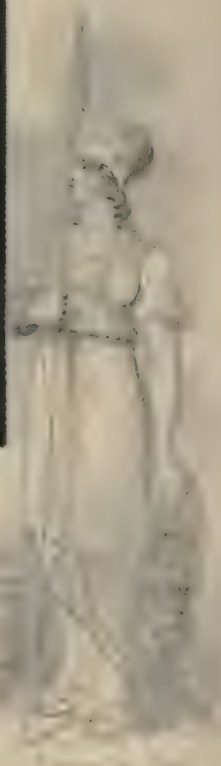
All this, however, distressing as it is, and disgraceful, in the highest degree, to those who, directly or indirectly, sanctioned the

continuance of such a barbarous system, appears to me no just argument against penal settlements, provided always they be judiciously regulated. To condemn "transportation" as a secondary punishment, because of the neglect of the positive and responsible duties of government towards a penal colony for forty years, is unreasonable; and if space be afforded me, at the close of this work, a chapter will be devoted to the examination of this important subject—important on many accounts—from the abolition of capital punishments for every offence, except murder; and by reason of the heavy expense attendant on the maintenance of a large prison population at home; the competition of their forced labour with that of the free and struggling citizens; the difficulty of accomplishing a prison reformation; and the almost utter impossibility of a man tainted with crime, and known to have been in a prison, being enabled to gain an honest livelihood in England. For the present, my duty consists in ascertaining the existing state of crime in New South Wales, and how far it has diminished of late years. The following statement extends over a period of twenty years; at the commencement of the period, the population was about 36,000; at its termination, about 200,000:—

Number of Convictions in the Supreme Court and Courts of Quarter Sessions, and the Number of Executions in the Colony.

Year.	Supreme Court.		Quarter Sessions.		Criminals Executed.					
	Felonies.	Misdemeanors	Felonies.	Misdemeanors	Protestants.		Roman Catholics.		Total.	
					Free.	Bond.	Free.	Bond.		
1829	244	29	—	—	4	24	6	18	52	
1830	269	6	—	—	6	16	7	20	49	
1831	205	29	—	—	3	10	3	16	32	
1832	225	2	—	—	1	1	1	9	12	
1833	219	11	—	—	1	9	5	15	31	
1834	272	11	—	—	—	22	—	20	42	
1835	256	1	—	—	2	15	4	18	39	
1836	168	4	—	—	2	14	3	7	26	
1837	177	12	—	—	1	4	5	2	12	
1838	199	18	—	—	2	5	1	10	19	
1839	159	12	609	132	3	8	—	11	22	
1840	99	9	565	161	1	6	—	1	8	
1841	159	20	468	106	2	8	3	2	15	
1842	135	41	536	85	3	2	2	3	10	
1843	146	34	418	48	1	3	—	2	6	
1844	199	22	331	48	1	7	—	—	8	
1845	198	15	303	51	—	1	2	—	3	
1846	180	11	350	77	—	—	1	—	1	
1847	176	10	281	61	—	—	3	1	4	
1848	189	68	269	45	4	—	5	—	9	
Total .	3,864	365	4,130	814	37	156	52	155	400	

Note.—The Quarter Sessions returns from 1829 to 1838, both inclusive, not rendered, or inaccurate.—Of the criminals executed, there were in the years 1830, one pagan; 1834, two faith uncertain; 1835, one pagan; 1841, two aborigines; 1842, one Jew and two aborigines; 1843, three aborigines; 1847, three aborigines



WILLIAM PITT

Prime Minister of Great Britain

1759-1806

Notwithstanding the five-fold increase of population, and the large mass of criminals poured into the colony from 1829 to 1840, the diminution of crime is very remarkable. In 1839, the convicted felonies amounted to 768; ten years after, in 1848, they were only 458. In 1829, capital punishment was inflicted in fifty-two instances; twenty years after (1848) there were only nine. During the first ten years of the period under review, the number of executions amounted to 276; during the ensuing ten years, they were no more than ninety-seven. There is a singular fact connected with this record of capital punishments, which I have carefully collated from the annual returns in the "Blue Books" transmitted by the governor to her Majesty's secretary of state for the colonies, and that is, the number of protestants—compared with Roman catholics—who have perished by the law for their crimes, viz., 193 to 207; the proportion of the free to the bond, was 89 to 311.

The offenders convicted in the supreme court of New South Wales during 1848, were—

Offences.	Sydney.	Circuit.	Melbourne.
FELONIES:—			
Murder	3	2	1
Manslaughter	2	3	2
Shooting at, &c.	1	—	6
Robbery	—	—	8
" with violence	1	6	—
Rape	2	4	—
Abduction	1	—	—
Burglary, &c.	2	1	2
Housebreaking	1	—	1
Receiving stolen goods	2	—	—
Stealing in a dwelling-house	—	3	5
Larceny	4	3	5
Forgery and Uttering	8	8	13
Piracy	6	—	—
Horsestealing	8	10	9
Sheep-stealing	—	1	—
Cattle-stealing	—	8	—
Other Offences	—	1	—
Total Felonies	41	50	52
MISDEMEANOURS:—			
Assaults	5	6	10
Riot and Assault	—	—	15
Subornation of Perjury	1	—	—
Bribery	—	—	1
Conspiracy	23	—	—
Fraudulent Insolvency	2	—	—
Obtaining Money under False Pretences	1	1	1
Uttering Base Coin	—	—	—
Neglect escape	—	—	1
Total Misdemeanours	32	7	28
Total Capital Convictions	2	3	1

The executions for the undermentioned offences during the year 1848, were—

Religion.	Murder.	Rape.
Protestants, free	2	2
Roman Catholics, free	1	—
Total	3	2

On comparing this return with the parliamentary paper, No. 410, laid before the House of Commons 21st May, 1838, I find that the criminal convictions before the supreme court, during the year 1835, amounted to 685, of whom 19 were for murder; 17 for attempting ditto; 1 for manslaughter; 13 for rape; 2 arson; 15 forgery; 82 bushranging, highway robbery, &c.; 67 cattle, horse, and sheep-stealing; 15 burglary; 3 perjury; 347 larceny, receiving known stolen property, &c.; and 87 for misdemeanours and assault. The total numbers committed for trial during the year 1835, (the last year given in the return), was 959 males, and 123 females, of whom 685 were convicted, 309 acquitted, 53 not prosecuted, and 35 admitted to bail; 86 received sentence of death, 368 transportation, and 162 were sent to hard labour, &c. A comparison of this return with that of 1848, must certainly be a matter of satisfaction to the colonists of New South Wales.

The convictions at the courts of Quarter Sessions in Sydney, Paramatta, Goulbourn, Bathurst, and Maitland, during the year 1848, were—

Felonies.—Burglary, 4; housebreaking, 7; stealing in a dwelling-house, 8; highway robbery, 1; robbery, 10; ditto, armed, 1; stealing from the person, 26; assault with intent to rob, 9; larceny, 156; receiving stolen property, 3; embezzlement, 1; abduction, 1; horse-stealing 7; cattle-stealing, 3; malicious wounding cattle, 1; suffering to escape, 1. Total, 269: viz.—Sydney, 150; Paramatta, 44; Goulbourn, 10; Bathurst, 15; Maitland, 50.

Misdemeanours.—Assaults with various intents, 25; assault and false imprisonment, 1; attempting to commit felony, 3; obtaining money or goods by false pretences, 5; uttering counterfeit coin, 3; having ditto in possession, 1; attempting to dissuade a witness from giving evidence, 1; keeping a common gaming-house, 1; rescuing cattle, &c., 4; being an incorrigible rogue, 1. Total, 45: viz.—Sydney, 28; Paramatta, 6; Goulbourn, 3; Bathurst, 1; Maitland, 7.

The returns for the Gaols and House of Correction, New South Wales, for the year 1848, are as follows:—

Gaols.	Total Admissions of Whites, in 1848.		Total.	Felons.				Misdemeanours.			
				Tried.		Untried.		Tried.		Untried.	
	Males.	Fem.		Males.	Fem.	Males.	Fem.	Males.	Fem.	Males.	Fem.
Sydney	1,217	348	1,565	111	13	16	2	50	33	18	4
Paramatta	162	96	258	22	4	5	5	11	7	1	2
Goulbourn	34	5	39	10	—	4	—	8	—	—	—
Bathurst	67	35	102	17	3	1	—	3	3	—	—
Newcastle	—	—	—	3	—	10	2	17	2	—	—
Port Phillip	—	—	—	39	1	4	1	45	11	—	—
Total	1,480	484	1,964	202	17	40	10	114	56	19	6

Note.—The return of felons is at Michaelmas, 1848. The admissions into Newcastle and Port Phillip gaols not stated.

The prisons are under the jurisdiction of the sheriff of the colony, and the superintendence of a stipendiary visiting magistrate and principal gaoler. Any of the magistrates may visit the gaol.

In the Sydney gaol there are 108 sleeping cells, and twenty-two solitary cells, none of which are dark or below ground. The classification directed by the gaol regulations has been observed. The chaplains of the church of England and of the church of Rome, appointed by the governor, perform divine service twice on Sundays, and once during the week. They also frequently visit and instruct the prisoners. Bibles, and other religious books are supplied. Dissenting ministers are admitted on the same terms as the ministers of the church of England and of Rome. Attached to the prison are two hospitals—one for male, and the other for female prisoners, who are under the care of the surgeon of the prison. The female prisoners are attended exclusively by female officers. The protestants and Roman catholics are continually kept apart. There is also a separation of hardened offenders from those imprisoned for the first time; also of the old from the young. The felon prisoners are kept at hard work, such as breaking or cutting stone. Whipping, or solitary confinement, is resorted to for breaches of gaol regulations: irons only in cases of urgent and absolute necessity. The other colonial gaols are similarly managed; and they will all bear a comparison with those of the United Kingdom.

To a great extent the colony is now purified from crime; and it appears by the documents laid before parliament, Jan. 31, 1850, that the colonists have declared, in a petition to the Queen, that "it is their duty and determination, by every legal and constitutional means, to oppose the revival of transportation."

The civil causes tried in the supreme court of New South Wales, during 1848, were—

Name.	Juries of Four.		Juries of Twelve.		Total.
	Defended.	Unde-fended.	Common.	Special.	
Sydney	82	20	2	7	111
Circuit	13	2	—	1	16
Port Phillip	20	7	2	12	41
Total	115	29	4	20	168

There are just grounds for stating that New South Wales is more free from crime than could have possibly been expected by the most ardent philanthropist. It can be compared with several portions of the United Kingdom. It may not be irrelevant to quote in this place an unimpeachable testimony in behalf of a large portion of the present population of the colony, which reflects great credit upon them, and fully confirms the opinions which I expressed in my *History of the Colonies*, in 1834-5.

Mr. T. H. Braim, formerly of St. John's College, Cambridge, and now head principal of Sydney College, N.S.W., in his interesting *History of New South Wales to 1844*, thus speaks of the Australian youth:—

"Descended, as many of them have been, from parents whose names were stained by crimes against their country and their God; brought up under a fearfully imperfect mental training, a neglected moral cultivation, and either an entire omission, or at the best but an imperfect performance of the duties and ordinances of religion, they have yet risen superior to these disadvantages, have earned for themselves a good name, have reared families in honour and respectability, and are now themselves in the enjoyment of general esteem and confidence, and their children availing themselves of blessings placed within their reach, which their fathers knew not, are bearing upon them the buds of excellence."

Of the emancipists, he says:—

"They form no uninteresting part of the population; feeling that they had a bad character to lose and

a good one to gain, they have in many instances set themselves about the work of reformation; some of them are reckoned among our most honourable tradesmen and merchants, among the most liberal supporters, too, of the various benevolent institutions which adorn our land (Australia). Some of these institutions have been all but entirely founded, and are now mainly supported by their means. In many cases they have, by their industry and perseverance, acquired considerable wealth; and in most instances the wealth thus obtained has been generously and honourably devoted to the public benefit, the real and substantial advancement of this land of their expatriation. Nor do we know a more pleasing trait in human character than that which is thus displayed; once degraded, they have paid to a violated law the satisfaction it imperatively demanded; but when the debt was paid another obligation was felt to remain behind. Society had lost that beneficial influence which each member is called upon to exercise, and to

atone for this was now their honourable desire. In the fair and honest pursuit of commerce, by untiring industry, they acquired those means which enabled them to gratify their wish—a competence—more, a profession—rewarded their patient toil; and no sooner was this poured into their lap, than they gave it back, spreading it through numerous channels, through each of which, as it flowed, it left blessings that even succeeding ages may enjoy. To say nothing of many public buildings, which are the chief architectural embellishments of our city, and which have been the result of their enterprise and zeal, we turn to some of those institutions of charity and benevolence which own them as their earliest supporters.”—[Vol. ii., pp. 315–16.]

A people of whom thus much can be truly said, are they not qualified for the enjoyment of free institutions?

CHAPTER IV.

EARLY AGRICULTURAL AND PASTORAL STATE OF NEW SOUTH WALES—STAPLE PRODUCTS, AGRICULTURE, LIVE STOCK, WOOL, TALLOW—PRICES AND WAGES—COMMERCE, IMPORTS AND EXPORTS—SHIPPING, &c.

At the period of the formation of New South Wales, or during its early struggles, when the colonists were again and again on the eve of perishing of want, how strangely the prophecy would have sounded in men's ears, could it have been foretold, that in little more than half a century, the colony would not only produce a sufficient quantity of animal and vegetable food for the support of a quarter of a million Englishmen and their descendants; but that Australia should have, in that short time, become the greatest wool-exporting country in the world; her salubrious climate, and the pasturage of her virgin soil, rendering the increase of sheep and cattle so rapid, as to induce their owners to slaughter them in great numbers, merely for the sake of the tallow thus obtained.

The present condition of New South Wales is indeed surprising, and the statements which mark the different epochs of her progress, well deserve attention in an historical point of view; and scarcely less, from the evidence they afford of the energy and industry of the Anglo-Saxon race—an energy to which difficulty appears to lend fresh vigour, and an industry as unflagging in its appointed course as that of the earth round the sun.

To me, who have had for years my mind

saturated—if I may be allowed the expression—with the one vast subject of the British colonial empire, the task of collecting and compiling its astonishing records has been truly a labour of love. I have studied the history of each colony, and have found in each a peculiar interest—an individuality, as it were—that grows upon the mind which views them as parts of a whole; different in their construction, but not incongruous; on the contrary, well calculated, by their union, to strengthen each other. In this light, which I sincerely believe to be the true one, I would fain bring them before my readers; and although deeply sensible of the magnitude of the subject, and the difficulty of the attempt, yet that appears to me as the strongest possible reason for endeavouring to afford a correct idea of the relative proportion of each possession, which can scarcely be conveyed, except by a general description of the whole. For instance, if in teaching a child the geography of England, we were to show him delineations—however accurate—of a few of the counties, and barely mention the others, would he not form a very inaccurate (if, indeed, any clear notion at all) of the country, as a whole: and so it is with our colonial empire.

This, however, is a digression; to return

to New South Wales. The public stock landed at Sydney Cove with the first British settlers, in January, 1788 (see p. 403), consisted of 1 bull, 4 cows, 1 bull calf, 1 stallion, 3 mares, and 3 colts; there were also a few sheep. These were placed on a spot at the head of Sydney Cove, which was cleared for a farm, where the seeds, plants, and fruit-trees, brought from England, Rio de Janeiro, and the Cape of Good Hope, were carefully tended, under the anxious superintendence of the governor. In May, 1788, the governor directed every person in the settlement to make a report of the live stock in his possession, which the returns stated at 1 stallion, 3 mares, 3 colts, 2 bulls, 5 cows, 29 sheep, 19 goats, 49 hogs, 25 pigs, 5 rabbits, 18 turkeys, 29 geese, 35 ducks, 142 fowls, and 87 chickens. Scarcely a greater calamity could have befallen the colonists, than the destruction, at this period, by native dogs, of five ewes and a lamb. Added to this, several sheep died, in consequence of feeding on grass which the newly cut trees had shaded previously from the air and sun; hence a general belief that it would not be possible to rear this description of stock. In June, 1788, the settlement sustained a severe loss, by the neglect of a convict who had charge of the cattle—two bulls and four cows strayed into the woods near Sydney, and were not recovered—the *only remaining cow* became so dangerously wild, that it was found necessary to shoot her.

In 1790, the stock sent out by his Majesty's government in the *Guardian*, consisting of 7 horses, 16 cows, 2 bulls, a number of sheep, goats, and 2 deer, were killed when the ship struck on an iceberg near the Cape of Good Hope (see page 405.) In this year the stock had been previously diminished in a wanton manner (see page 405.) In session 1791 H.M.S. *Gorgon* arrived, to the great joy of the colonists, with 1 bull calf, 16 cows (3 bulls and 7 cows died on the passage), 68 sheep, 11 hogs, 200 fruit trees, and a quantity of garden seeds. At the close of this year the public live stock in the colony amounted to 3 stallions, 1 mare, 2 colts, 16 cows, 2 calves, 1 ram, 50 ewes, 6 lambs, 1 boar, 14 sows, and 22 pigs. The ground in cultivation at the Rose Hill government farm (Paramatta) consisted of 300 acres in maize, 44 in wheat, 6 in barley, 1 in oats, 2 in potatoes, 4 in vines, 86 in garden ground, and 17 in cultivation by the New South Wales corps.

In addition to these, there were 150 acres cleared, to be sown with turnips; ninety acres were in cultivation by settlers; twenty-eight by officers, civil and military, at and about Sydney and at Paramatta; 140 acres were enclosed, and the timber cleared for cattle; making a total of 920 acres of land thinned, cleared, and cultivated. So dense, however, was the forest around Sydney and Paramatta, that any one straying a mile from the huts was almost invariably lost; and in this way many convicts and soldiers perished.

In June, 1792, the *Atlantic* storeship brought from Calcutta two bulls, a cow, twenty sheep, and twenty goats, of the Bengal breed. In the October of the same year, nearly five years after the establishment of the colony, the whole of the ground in cultivation, both on account of the crown and of individuals, was—in wheat, 208½ acres; barley, 24½; maize, 1,186½; garden-ground, 121½: total, 1,640½ acres. Ground cleared of timber, 162½ acres. The quantity of land which had passed to settlers, under the seal of the colony, amounted to 3,470 acres, of which 470 were in cultivation, and the timber cleared from 100 more, ready for the sowing of grain. The stock belonging to the public, kept at Paramatta, consisted of 3 bulls, 2 bull calves, 5 stallions, 6 mares, 105 sheep, and 43 hogs.

The governor gave to each married settler one ewe for the purpose of breeding, and to others he gave such female goats as could be spared. Land was granted, conformably to instructions from the secretary of state. Non-commissioned officers and privates of the marines, desirous of remaining in the colony, in the proportion of 150 acres to a married non-commissioned officer; 130 acres to a single ditto; 100 acres to a married private; and eighty acres to a single man; and, on receiving their discharge, clothing, provisions for one year, seed, and agricultural implements were given to each settler. Each male convict, emancipated or discharged, received, if single, thirty acres; if married, thirty acres, and ten acres for each child. The policy of the government was, to establish a chain of farms between Sydney and Paramatta, fifteen miles distant, so that the country might be opened; which was subsequently carried out by extending lines of settlement to Windsor, on the Hawkesbury river, to Richmond, on the Nepean River, and other places, where cultivable land was found.

In 1793, of the stock which had been landed in the colony, there remained but three bulls, twenty-one cows, and seven calves. During the early stages of the settlement, it was noticed as a singular fact among the live stock, that the proportion born of males to females was about three to one. This, however, did not continue; the sexes soon became equalized, and then the number of female preponderated over the male births.

In January, 1794, one small cow and a Bengal steer, weight 372 pounds, (both private property,) were killed for the use of the troops, and sold to them at eighteen pence per pound. This was but the third time that the colonists had tasted fresh beef since their arrival in 1788, viz.—once soon after their landing, and a second time when the lieutenant-governor and officers of the settlement were feasted by the captain of a Spanish ship. In March, 1794, only one serving of salt meat remained in store, and that was to be the food of half a week. After that period, says Collins, "the prospect was truly discouraging; for mere bread and water appeared to be the portion of by far the greater part of the inhabitants of these unfortunate settlements—of that part, too, whose bodily labour must be called forth to restore plenty, and attain such a state of independence on the parent country, as would render delay or accident, in the transport of supplies, a matter of much less moment to the colony than it had ever hitherto been considered." Even a shark, caught in the harbour, yielded food to several; the oil procured from the liver sold at a shilling a quart; for but "very few houses in the colony were fortunate enough to enjoy the pleasant light of a candle."

The seed-wheat was untouched, and might remain so for a fortnight; but all the animals, public and private, were threatened with destruction, to supply food for 3,000 people. On 8th March, when the doors of the provision store were closed, and the convicts had received the last allowance which remained, a ship stood in for Port Jackson, but a gale of wind split her topsail, and she was driven to sea, to the dismay of the almost famishing inhabitants: at night the wind increased; and, during the ensuing day, nothing more was seen of the stranger. On the evening of the 9th, another sail (a brig) was in sight; but a second night of sleepless anxiety was passed, and the morning of the 10th dawned tempestuously: about three

o'clock, however, the wind changed, and the ship *William*, from Cork, with a cargo of beef and pork, and the *Arthur*, a small brig from Bengal, anchored that night in Port Jackson, and the 3,000 colonists were saved from a fearful death.

The home government now became conscious of the precarious supply of food obtainable for the convicts and settlers, and several vessels were despatched in succession to the colony, laden with all sorts of provisions; the live stock, public and private, was carefully preserved, and its numbers now were—mares, 11; stallions, 9; male asses, 4; female asses, 2; bulls, 15; cows, 25; ewes, 316; rams and wethers, 210; female goats, 352; male ditto, 170; hogs, several hundred. On the 1st of July, 1795, the colony was again reduced to straits; the salt provisions were all expended but a few casks reserved for the use of the troops, and on Saturday the 11th, there was no more animal food for the convicts; a greyhound was killed and its flesh sold for that of Kangaroo; but happily on the 26th of July, H.M.S. *Providence*, captain Broughton, arrived with supplies from England, and was followed by H.M.S. *Reliance* and *Supply*. On the 1st of September, 1796, the live stock in possession of government, and of the civil and military officers of the settlement, consisted of mares and horses, 57; cows and calves, 101; bulls and bull-calves, 74; oxen, 54; sheep, 1531; goats, 1,427; hogs, 1869. The cattle which had strayed from the settlement in the year 1788, were known to be wild, and to have largely increased in a fine district now termed the Cow Pastures, to the westward of the Nepean river. The number of acres in cultivation were 5,419, and the number of persons in the colony was 3,959. It is unnecessary to follow up this narrative of the pastoral and agricultural state of New South Wales; but it offers a striking contrast when compared with the two following tables, shewing the extent of cultivation in the colony, and its progress for the past twelve years; and the number of horses, horned cattle, sheep, and swine in each colony and district on the 1st January, 1849, when it appears there were, in cultivation with wheat, 63,463 acres, yielding 638,072 bushels of grain; 26,103 acres in maize, yielding 722,704 bushels; of oats, fifty-eight bushels. Altogether, upwards of 1,500,000 bushels, or nearly 200,000 quarters of grain is raised, furnishing a quarter annually for each inhabitant.

526 LAND IN CULTIVATION AND PRODUCE N. S. WALES, 1837 to 1848.

There are no consecutive details concerning the grant, sale, and cultivation of land in the colony; some idea of the progress may be conveyed by the following general statement:—

Year.	Granted.	Cleared or Pastured.	Cultivated.
	Acres.	Acres.	Acres.
1810	95,637	81,937	13,700
1820	381,466	349,195	32,271
1825	673,699	127,878	45,514
1828	2,906,346	231,578	71,523
1833	4,014,117	—	—
1848	5,500,000	—	1636,69

There is less than one acre under crop to each mouth in the colony; but this yields sufficient vegetable food; for the total value of grain, flour, rice, and potatoes imported for use in 1848, was only about £35,000.

The “commissioners’ districts beyond the

settled districts,” to which reference is made in several tables, are those in which the squatters are located. The territory not included in the several counties is divided into districts, over each of which an officer called a commissioner of crown lands is appointed. He has under him a body of mounted constables or police, and his duty consists in preserving the peace of the district; in preventing unauthorized persons occupying the crown lands; in ascertaining that the squatters do not interfere with each other’s lands; in enforcing compliance with the squatting regulations; and in making periodical returns to the government at Sydney. The terms on which the land is let to squatters are stated at pages 427 and 431. This respectable and enterprising class of settlers now occupy many of the finest districts in Australia, and possess considerable wealth.

The Quantity of Land in Cultivation, showing Crops and Produce (exclusive of Gardens and Orchards), in New South Wales, including the District of Port Phillip, from the year 1837 to 1848 inclusive.

Year.	CROPS.									Total Number of Acres in Crop.
	Wheat.	Maize.	Barley.	Oats.	Rye.	Millet.	Potatoes.	Tobacco.	Sown Grasses, Oats, and Barley for Hay.	
1837	Acres. 59,975	Acres. 18,381	Acres. 2,551	Acres. 3,893	Acres. 493	Acres. 80	Acres. 1,165	Acres. 533	Acres. 5,054	92,125
1838	48,060	25,043	2,922	3,767	429	39	1,788	925	9,939	92,912
1839	48,401	22,026	3,490	6,793	483	46	1,115	424	12,534	95,312
1840	74,133	24,966	5,144	5,453	609	115	2,594	381	12,721	126,116
1841	58,605	25,004	5,423	5,892	495	47	4,027	380	15,257	115,130
1842	65,188	27,324	5,320	4,467	486	99	5,174	224	18,592	126,874
1843	78,083	29,061	5,727	4,537	514	42	5,872	655	21,162	145,653
1844	81,903	20,798	7,236	4,336	359	43	6,783	871	21,766	144,095
1845	87,894	25,372	10,455	6,109	330	36	5,101	483	27,551	163,331
1846	88,910	31,773	9,215	9,390	177	82	5,537	228	37,221	182,533
1847	81,044	27,240	7,178	10,201	310	83	5,550	67	33,111	164,794
1848	87,219	20,375	8,789	13,572	167	14	5,774	201	27,558	163,669

Year	PRODUCE.									Hay.
	Wheat.	Maize.	Barley.	Oats.	Rye.	Millet.	Potatoes.	Tobacco.		
1837	Bushels. 692,620	Bushels. 632,155	Bushels. 51,447	Bushels. 17,119	Bushels. 6,753	Bushels. 695	Tons. 2,102	Cwts. 2,034	Tons. 5,627	
1838	469,140	556,268	32,103	13,416	4,878	353	3,496	4,952	6,960	
1839	805,140	525,507	66,033	27,788	7,008	283	2,601	2,509	25,923	
1840	1,116,814	777,947	105,389	66,020	8,863	3,338	11,050	4,300	21,329	
1841	832,776	503,803	90,172	62,704	6,507	1,072	11,141	2,642	17,175	
1842	854,432	590,134	88,767	84,321	4,451	1,201	12,561	2,014	18,622	
1843	1,000,225	719,358	95,658	92,268	5,145	410	16,392	6,098	27,774	
1844	1,312,652	575,913	132,612	70,620	4,475	511	22,748	6,382	31,848	
1845	1,211,099	499,122	175,407	88,193	4,101	775	19,906	3,985	28,614	
1846	1,421,750	870,400	193,835	216,783	2,250	1,929	18,329	2,087	42,754	
1847	1,027,802	725,704	87,636	221,731	1,200	798	14,240	725	33,111	
1848	1,528,874	262,340	145,219	116,643	2,386	158	14,954	3,059	37,795	

Note.—From 1837 to 1841 the Crops and Produce of Land beyond the Boundaries of Location are not included.

CULTIVATION AND SQUATTERS IN NEW SOUTH WALES, 1848. 527

The following estimated quantity of land in cultivation in New South Wales, exclusive of gardens and orchards, on 31st December, 1839, will afford a comparison with the returns for the year 1848:—

In 1839-40, the squatting stations contained 6,666 males and 621 female Europeans, who had among them 7,088 horses, 371,699 horned cattle, and 1,334,593 sheep, and the stations were thus distributed:—

Articles.	Under Crop.	Produce.		District.	Persons occupying Stations.	Estimated Extent of Stations.		Acres in Cultivation.
	Acres.	Bushels.	Tons.			Miles.	Acres.	
Wheat	48,401	805,140	—	Port Macquarie	21	137	87,760	561
Maize	22,026	525,507	—	New England .	53	560	358,400	333
Barley	3,490	66,033	—	Liverpool Plains	111	1,157	740,480	344
Oats	6,793	27,788	—	Bligh	53	5,696	3,655,440	201
Rye	483	7,008	—	Wellington . .	77	1,265	809,600	571
Millet	46	283	—	Lachlan	95	4,193	2,683,520	2,334
Potatoes	1,115	—	2,601½	Murrumbidgee.	134	3,137	2,007,680	1,720½
Tobacco	424	—	125½	Maneroo	150	1,585	1,014,880	1,978
Sown Grasses (Hay)	12,534	—	25,923					

Quantity of Land in Cultivation in New South Wales in 1848, in Acres.

Counties. (Sydney District.)	Wheat.	Maize.	Barley.	Oats.	Rye.	Millet.	Pota- toes.	Tobacco	Sown Grasses.	Wheat, &c., for Hay.	Total number of Acres in Crop.
Argyle	2,406	166	474	58	1	1	177	—	77	1,567	4,927
Bathurst	2,966	134	384	—	—	—	132	—	—	1,070	4,656
Bligh	215	49	4	8	—	—	—	—	—	127	403
Brisbane	328	283	12	—	—	13	11	—	5	130	732
Camden	7,350	1,879	477	171	18	8	510	4	476	1,238	12,071
Cook	3,620	2,732	246	158	3	—	169	3	—	577	7,508
Cumberland . . .	10,310	5,327	877	1,143	250	14	153	1	376	15,859	34,311
Durham	7,392	4,663	360	5	—	16	29	58	561	352	18,437
Georgiana	1,537	13	125	46	9	—	123	—	—	239	2,086
Gloucester	2,517	1,311	73	—	—	5	16	—	100	38	4,061
Hunter	1,079	1,429	5	13	—	—	2	—	5	22	2,555
King	1,028	119	182	12	—	—	28	—	—	229	1,598
Macquarie	261	906	19	7	—	—	7	—	—	—	1,200
Murray	1,769	234	307	157	1	—	106	—	—	1,058	3,632
Northumberland .	9,344	5,207	299	54	1	—	15	72	130	684	15,816
Phillip	425	103	19	—	4	—	—	6	60	105	722
Roxburgh	1,600	60	250	—	10	—	—	150	—	500	2,570
St. Vincent	1,894	731	85	15	—	—	—	690	—	274	3,689
Stanley	—	35	—	—	—	—	—	7	—	—	42
Wellington	307	83	16	6	—	—	13	9	—	259	693
Westmoreland . .	1,111	150	81	36	11	4	194	—	—	200	1,787
Total in Counties	57,453	25,564	4,295	1,900	308	77	2,595	1,000	1,739	24,528	118,525
Commissioner's Dis- tricts, beyond the Limits of Location.											
Bligh	305	—	—	—	—	—	—	—	—	—	305
Clarence River . .	—	298	6	—	—	—	27	—	—	—	331
Darling Downs . .	30	120	4	5	—	—	10	—	—	10	180
Gwyder	—	—	—	—	—	—	—	—	—	—	—
Lachlan	1,297	34	25	25	2	—	11	1	—	591	2,046
Liverpool Plains .	—	—	—	—	—	—	—	—	—	—	—
Lower Darling . .	—	—	—	—	—	—	—	—	—	—	—
McLeay River . . .	87	314	16	2	—	—	9	—	—	12	440
Manaroo	1,258	104	70	50	—	—	113	—	—	374	1,969
Moreton Bay . . .	22	36	—	—	—	—	—	—	—	—	58
Murrumbidgee . .	2,000	300	200	—	—	—	—	—	—	450	2,950
New England . . .	830	230	120	90	—	5	40	—	—	85	1,500
Wellington	83	3	2	—	—	—	7	—	6	93	194
Total in Commis- sioners' Districts	5,912	1,439	443	173	2	5	217	1	5	1,615	9,973

Note.—There are no returns for Gwydir, Liverpool Plains, or the Lower Darling.

528 AGRICULTURAL PRODUCE OF NEW SOUTH WALES, IN 1848.

Produce in New South Wales in 1848, and Area in Square Miles of each County.

Counties. (Sydney District.)	Wheat.	Maize.	Barley.	Oats.	Rye.	Millet.	Pota- toes.	Tobacco	Sown Grass Hay.	Wheat, &c. for Hay.	Area in Square Miles
	bush. a.	bushels.	bushels.	bushels.	bushels.	bushels.	tons.	cwts.	tons.	tons.	
Argyle	20,297	3,389	5,441	702	6	35	368	—	66	682	1,951
Bathurst	49,488	3,777	6,490	—	—	—	454	—	—	1,590	1,860
Bligh	3,120	58	16	10	—	—	—	—	—	104	1,683
Brisbane	4,038	7,105	80	—	—	—	28	—	15	—	2,344
Camden	11,077	37,055	7,864	2,301	171	20	526	80	754	113	2,188
Cook	34,509	80,498	2,405	1,789	60	—	248	23	—	698	1,652
Cumberland	57,430	113,786	4,682	2,397	68	103	556	9	366	402	1,445
Durham	75,654	126,889	3,202	—	—	57	50	605	878	4,256	2,187
Georgiana	23,493	202	1,707	448	179	—	373	—	—	127	1,924
Gloucester	34,268	32,641	1,497	—	—	170	25	—	105	225	2,930
Hunter	7,350	45,105	100	262	—	—	6	—	3	12	2,056
King	9,682	2,284	2,078	198	—	—	38	—	—	14	1,781
Macquarie	3,437	30,595	650	30	—	—	17	—	—	215	2,000
Murray	23,196	4,904	3,935	2,606	—	—	185	—	—	626	2,248
Northumberland	83,199	152,589	4,624	338	102	285	196	3	773	729	2,842
Phillip	5,040	2,850	60	—	50	—	11	—	50	44	1,618
Roxburgh	25,000	1,500	4,000	—	300	—	60	—	—	1,000	1,519
St. Vincent	30,241	21,685	944	274	—	—	2,200	—	—	270	2,667
Stanley	—	1,010	—	—	—	—	9	—	—	—	—
Wellington	4,738	2,440	80	40	—	—	38	—	14	177	1,656
Westmoreland	16,510	2,788	8,146	691	167	33	532	—	—	178	1,592
Total in Counties	594,767	673,780	50,731	12,136	1,103	703	6,219	720	3,044	11,472	39,586
Commissioners' Dis- tricts beyond the Limits of Location.											
Bligh	7,265	—	—	—	—	—	—	—	—	—	—
Clarence River	400	10,139	—	—	—	—	138	—	—	—	—
Darling Downs	400	4,800	—	—	—	—	12	—	—	8	—
Gwydir	—	—	—	—	—	—	—	—	—	463	—
Lachlan	14,838	517	998	310	17	—	7	5	—	26	—
Liverpool Plains	—	—	—	—	—	—	—	—	—	—	—
Lower Darling	—	—	—	—	—	—	—	—	—	—	—
M'Leay River	1,575	10,245	352	—	—	—	13	—	—	—	—
Manaroo	12,550	3,220	360	400	—	—	169	—	—	2,561	—
Moreton Bay	440	6,500	—	—	—	—	—	—	—	—	—
Murrumbidgee	24,000	7,500	3,000	—	—	—	—	—	—	562	—
New England	20,750	5,750	2,850	1,500	—	75	420	—	—	90	—
Wellington	1,097	80	30	—	—	—	7	—	4	51	—
Total in Commis- sioners' Districts	83,305	48,924	7,790	2,210	17	75	766	5	4	3,761	—

Note.—There are no returns for Liverpool Plains, or the Lower Darling.

The information contained in these returns is not supposed to be accurate, and must be viewed merely as an approximation to truth. It, however, conveys some idea of the relative extent of cultivation in each county and commissioners' district. The commissioners' districts are those occupied by squatters, to whom cultivation, except for their own supply, is prohibited. The area of all the above-named counties is stated to be, in square miles, 39,586, equal to 25,374,400 acres, of which it will be seen, that no more than 118,525 acres are under cultivation.

The "Commissioners' Districts," or the squatting stations, are held for pastoral purposes; the number of squatters, and the

area held by each, in 1849, throughout the territory of New South Wales (including the Sydney and Port Phillip Districts), was—

Persons holding licences—Sydney, 1,019; Port Phillip, 666 = 1,685. Number of licences held—Sydney, 1,520; Port Phillip, 827 = 2,347. Acres of land occupied—Sydney, 43,896,232; Port Phillip, 29,464,240 = 73,360,472; or in square miles, Sydney, 68,000; Port Phillip, 46,000 = 114,600 square miles (the area of England is about 60,000 square miles). Average quantity of land held by each individual in Sydney, 67 square miles; in Port Phillip, 69; in the whole colony, 68. Two squatters hold more than 800,000 acres each; two ditto, 600,000 each; one ditto, 450,000; two ditto, 400,000; four ditto, 350,000; three ditto, 300,000; fourteen ditto, 250,000; fourteen ditto, 200,000; thirty ditto, 150,000; seventy-three ditto, 100,000; and two hundred and ninety-eight squatters hold more than 50,000 acres each.

According to a return prepared at the office of the colonial secretary of New South Wales, dated Sydney, 1st May, 1849, the following is a statement of the number of horses, horned cattle, pigs, and sheep, in each county and district in New South Wales, on 1st January, 1849:—

Counties or Districts.	Horses.	Horned Cattle.	Pigs.	Sheep.
Sydney District settled				
Argyle	3,652	22,831	1,285	260,708
Bathurst	3,614	18,339	1,021	266,369
Bligh	1,015	6,561	63	119,352
Brisbane	1,795	10,163	949	132,319
Camden	5,490	33,953	6,156	38,657
Cook	2,112	8,929	4,283	13,104
Cumberland	13,294	29,710	13,728	11,265
Durham	7,014	36,977	8,085	122,588
Georgiana	2,923	24,517	936	198,325
Gloucester	1,180	21,176	2,662	3,593
Hunter	1,416	6,776	1,735	11,239
King	1,319	16,200	708	106,986
Macquarie	872	14,544	698	14,300
Murray	4,340	28,288	1,339	328,972
Northumberland	5,827	34,563	10,653	21,806
Phillip	1,033	6,030	163	89,800
Roxburgh	2,420	18,250	630	188,900
St. Vincent	2,329	20,724	3,118	62,504
Stanley	446	3,947	145	23,829
Wellington	681	11,548	256	77,693
Westmoreland	2,040	13,277	924	46,994
Total	64,817	387,283	59,537	2,139,243
Commissioners' District, beyond the settled District.				
Bligh	1,313	52,940	..	193,221
Clarence River	1,405	48,847	867	116,767
Darling Downs	1,200	40,600	..	553,000
Gwyder	2,060	118,097	50	109,347
Lachlan	4,386	130,594	791	355,600
Liverpool Plains	3,946	130,081	..	341,465
Lower Darling	450	21,062	25	39,621
McLeay River	884	17,128	706	250
Maneroo	5,446	106,530	603	353,252
Moreton Bay	1,127	19,412	145	290,962
Murrumbidgee	4,596	132,301	1,200	704,165
New England	3,582	79,820	1,000	822,603
Wellington	1,683	69,385	232	277,025
Wide Bay	51	36	..	20,787
Burnett	372	6,409	..	204,734
Maranoa	62	5,639	..	8,500
Total	32,583	978,841	6,679	4,391,299
Total in Sydney Dis.	97,400	1,366,164	65,216	6,530,542
Port Phillip District, within settled District				
Bourke	2,000	30,500	2,550	137,600
Grant	627	8,056	535	267,300
Normanby	888	15,698	247	179,975
Belfast	65	208	59	81
Alberton	612	16,638	368	26,007
Total	4,192	71,100	3,759	610,963
Commissioners' Districts, beyond the settled District.				
Gipps' Land	1,070	37,985	500	193,961
Murray	3,483	84,942	..	521,997
Portland Bay	3,825	122,065	..	1,869,130
Western Port	3,233	54,158	1,100	1,196,698
Wimmera	692	16,438	300	737,528
Total	12,303	316,588	1,900	4,519,314
Total P. Phillip Dis.	16,495	386,688	5,659	5,130,277
General Total	113,895	1,752,852	70,875	11,660,819

VOL. I.

It will be observed in the foregoing table that the number of sheep in the squatting districts is twice the number that are in the settled districts or counties. So also with regard to horses and horned cattle. The Murrumbidgee and the Darling Downs districts appear to be the favourite sheep pastures.

The progressive increase of live stock in New South Wales is thus shewn:—

Years.	Horses.	Horned Cattle.	Sheep.	Swine.
1788	7	7	29	No returns
1810	1,114	11,276	34,550	
1820	4,014	68,149	119,777	
1825	6,142	134,519	337,622	
1828	12,479	262,868	536,391	
1848	113,895	1,752,852	11,660,819	70,875

Such a rapid augmentation in the number of domesticated animals is unexampled in the history of any country, and would have been yet more remarkable, but for the extensive slaughtering of horned cattle and sheep to obtain tallow. What the amount may be at the next decimal period, it is impossible to say; the extensive regions to the northward recently found available for pasturage, will give an additional stimulus to the production of animal food and wool.

Live stock is becoming a staple export of New South Wales; horses are being largely purchased by the East India Company as remounts for their cavalry and horse artillery; and when steam navigation is established between India and Australia, this will probably prove a very lucrative traffic, as the horses of the southern colonies are well suited to withstand the trying climate of India. The following shews the trade in live stock for the last few years:—

Live Stock Imported.

Year.	Horses.	Horned Cattle.	Sheep.	Sheep and Hogs.
1837	92	97	55,208	307
1838	185	74	9,822	192
1839	652	135	17,567	359
1840	1,008	244	19,958	252
1841	875	156	530	50 Hogs
1842	113	89	638	65 Ditto
1843	31	28	609	4 Ditto
1844	52	21	307	—
1845	693	48	811	2
1846	655	29	1,228	—
1847	591	22	2,285	—
1848	255	26	1,363	—

Note.—The Sheep have principally been imported from Van Diemen's Land to the District of Port Phillip. The Horses have chiefly come from South America.

Live Stock Exported from N. S. Wales and P. Phillip.

Year.	Horses.	Asses and Mules.	Horned Cattle.	Sheep.	Hogs.	Value.
						£.
1843	248	2	1,852	77,116	—	41,915
1844	489	3	3,329	53,318	—	40,394
1845	1,159	—	3,972	33,651	6	53,438
1846	1,021	—	6,052	37,848	4	52,942
1847	466	—	8,034	71,440	—	57,355
1848	1,182	—	16,904	895,211	—	85,184

The colonists have now turned their attention to the curing of animal food, which will, doubtless, soon form a valuable item in their staple products. I used, while in

China, some of the concentrated soup prepared in New South Wales, and found it excellent. Samples of the salted meats sent to England have been pronounced equal to the beef provided by the Cork contractors for the navy; the climate is sufficiently cold to admit, during the season, of perfect curing, and it is to be hoped that her Majesty's government will allow her Majesty's ships on the East India station to be provisioned from Australia.

The following table shows the quantity and value of salt meat exported from, and the value of salt meat imported into, the colony in the under-mentioned years:—

Year.	Beef, Pork, and Mutton.	Mutton and Bacon Hams.	Tongues.	Value as entered in Returns of Exports.	Value as entered in Returns of Imports.
	Quantity.	Quantity.	Quantity.		
1843	2,867 casks 856½ tons	—	224 lbs.	£13,924	£19,286
1844	4,292 casks 294½ tons	20,615	110 cwt. 150 in No.	18,730	3,355
1845	1,142 casks 425½ tons 345 packages 4,400 lbs. of preserved meats	94 cwt. 11,422 in No.	63 casks 2,450 in No.	12,163	5,200
1846	721 casks 1,126 tons 12 packages of preserved meats	39 cwt. 300 in No.	12 casks 300 in No.	15,664	7,197
1847	4,335 casks 866 tons 224 packages of preserved meats	224 cwt.	127	24,278	3,917
1848	2,308 casks 616 tons 90 casks of preserved meats	145 cwt.	228	19,477	3,229

The extensive herds of cattle will naturally cause a large increase in the hide and leather trade; the imports and exports of hides, and of manufactured and unmanufactured leather, is thus shown, from 1843 to 1848:—

Year.	Value Imported.	Value Exported.
1843	£36,185	£10,305
1844	19,844	22,285
1845	14,124	40,866
1846	15,230	28,999
1847	21,283	39,001
1848	24,358	25,939

The consumption of meat in Australia is very great: it is eaten three times a day; two hardworking bushmen will consume forty pounds in a week without difficulty; on farms beef is generally used, at pastoral stations, mutton; or they are alternated; one week four or five sheep are killed, next week a bullock. Both beef and mutton

yield to the palate a richer flavour than the generality of meat in England. Poultry is reared in considerable quantities for the markets of Sydney; and in the neighbourhood of the principal towns, Mr. Alexander Harris says he has seen "a whole flock of turkeys almost keeping themselves on the wild grasshoppers and such vegetable matters as they could pick up." Geese, ducks, and barn-door fowl multiply with astonishing rapidity. Sydney has a population of about 50,000 inhabitants, and the following is a statement of the live stock slaughtered in the city during 1848—viz., horned cattle, 30,613; sheep, 95,824; and pigs, 8,457.

Estimating the cattle at 830 lbs. each, the sheep at 70, and the pigs at 100, the quantity of meat would be 127,282,000 lbs., equal to six pounds three quarters per day for each mouth. There are, however, large exports of meat.

But it is not only in the article of animal food that New South Wales is now independent; the colony grows very nearly sufficient corn and vegetables for its annual wants. It will be seen by the following, that the value of vegetable food imported, has been diminished from more than a

quarter of a million sterling to less than fifty thousand pounds; and, by the subsequent table, that the colony is now exporting grain and flour. What a contrast this presents to the statements of famine and impending destruction which mark the early history of the colony:—

Articles.	1838.	1839.	1840.	1841.	1842.	1843.	1844.	1845.	1846.	1847.	1848.
IMPORTS:—											
Wheat . . bushels	79328	171207	290843	239224	163224	395374	265704	109355	237717	224720	143235
Maize . . . "	6040	30862	19185	12773	1120	583	17	—	536	—	—
Barley, Oats, and Peas . bushels }	58927	541733	63363	41610	37798	61361	35194	46399	46454	37469	49163
Flour and Bread lbs.	2478712	3579076	7108663	14929503	7247016	6941760	4370240 & 250 casks of Biscuit	3327632	5367936	5335680	3131744
Rice "	728346	1414747	6849896	3603076	2260046	1678208	260288	450040	1283968	1044288	932582
Potatoes . . tons	1167	1189	1723	480	1401	547	1085	430	2663	1227	1617
Value of Imports . £	64313	285110	217063	201632	113070	112387	65442	39855	63764	52740	41489
EXPORTS:—											
Wheat . . bushels	—	—	—	—	—	273	825	1362	6252	8820	485
Maize . . . "	—	—	—	—	—	4687	26184	5334	1867	62262	27058
Barley, Oats, and Peas . bushels }	—	—	—	—	—	1870	1798	292	545	4216	1300
Flour and Bread lbs.	—	—	—	—	—	3146192	2028344	2837632	3491744	1786400	650832
Potatoes . . "	—	—	—	—	—	47	—	50	3	84	5
Value of Exports . £	—	—	—	—	—	13486	12232	13931	12258	16944	6639

Wool.—The origin, progress, and the production of this valuable commodity deserve especial notice, from the material share it has had in the growing prosperity of Australian commerce, and moreover for its beneficial influence on the manufactures of the mother country. There can scarcely be a doubt, that the extensive growth of wool in Australia, and the reduction of price in German and Spanish wools, have had a most important effect on the woollen manufactures of England, and enabled her to maintain a competition with foreign countries. The manufacture of wool is the oldest known branch of trade in England; it existed during the period when the Romans were encamped among the Britons; and although the trade was greatly fostered by Edward III., there are notices on the statute book 100 years prior to that period, relative to "broad cloths two yards within the lists." For several centuries, it was a favourite policy of English monarchs and statesmen to encourage the wool trade; and to such an extent was this feeling carried, that it was deemed politic even to suppress the manufacture in Ireland. At the end of the seventeenth century, the value of the wool shorn in England was estimated at £2,000,000. The number of sheep and lambs in the United Kingdom is now estimated at about 40,000,000, and the annual production of wool at about 120,000,000 lbs. This, however, is a very vague estimate, which there are no agricul-

tural statistics in Britain to verify or disprove. It was, however, admitted, in the evidence before the House of Lords, in 1828, that a great deterioration had taken place, during the previous thirty years, in the fineness of English wools; the efforts of agriculturists having been directed to the weight of the carcase and of the wool—the lean Herefordshire sheep yielding 1½ lbs. of fine wool; the fat Norfolk sheep yielding 3 lbs. of coarse wool. Hence it became necessary to import largely Spanish and Saxony wools, in order to maintain the character of our cloths.

In 1829, the quantity of foreign wools imported into the United Kingdom was 21,118,976 lbs.; of which 14,110,006 lbs. came from Germany; 3,751,714 lbs. from Spain; and 1,838,642 lbs., or about *one-twelfth part* from all the Australian colonies. In 1834, Germany sent us 22,634,615 lbs.; Spain, 2,343,915; Russia, 3,107,951; United States, 2,048,309; Italy, 2,550,819; Tripoli and Barbary, 1,977,816; Turkey and Greece, 1,474,522; South America, 1,099,052; and our Australian colonies, 3,558,091 lbs. The total importations for the year were 45,647,870; Australia did not therefore then contribute *one-tenth part* of the foreign wool required. In 1848, the total quantity of wool imported into the United Kingdom was 69,343,477 lbs.; of this Germany furnished 14,428,723; Spain only 106,638; Russia, 2,349,009; Italy, 736,137; Turkey, 690,300; Denmark,

1,381,356, South America, 7,884,931; British India, 5,997,435; Cape of Good Hope, 3,407,250; and Australia, 80,034,567 lbs., in the following proportions:—New South Wales and Port Phillip, 22,091,481 lbs.; Van Diemen's Island, 4,955,968; South Australia, 2,762,672; Western Australia, 129,295; and New Zealand, 95,151 lbs.; our colonies in the Southern Pacific therefore contributed nearly *one-half* of the whole wool imported in the year 1848; while Germany, on which the main reliance of our manufactures was placed, only sent about 300,000 lbs. more than it had done twenty years ago. The proportions of colonial to foreign wool imported for twenty years between 1826 and 1846, at intervals of five years, is thus shewn; the two figures represent so many million lbs. weight; by colonial wool is understood all wool from possessions of the British crown:—

Annual Averages of Five Years.	Foreign Wool.	Colonial Wool.	Total Importation.
1826—30	25	2	27
1831—35	34	4	38
1836—40	44	10	54
1841—45	36	22	58
1846	34	30	64
1848	40	29	69

In the preceding table, is added the year 1848, as a further comparison of the ratio of colonial and foreign wool importations: 1850 would be still better in behalf of our colonies; and let it be remembered that, in 1826, the proportion of colonial to foreign wool was only the 250th part of the annual imports.

The following table, prepared by the statistical department of the Board of Trade, in March, 1846, shews the importations of colonial wool compared with foreign wool, year by year, from 1818 to 1844; it will be seen that while the quantity of foreign wool has not been doubled in quantity, that of colonial wool has risen from nothing to 22,600,000 lbs., or more than the foreign importations in any of the six years ending 1824. It may also be noted that the admission of colonial wool, duty free, in 1825, had a powerful influence in stimulating production in the colonies; in one year (1826) the importation increased nearly fourfold; for seventeen years there was an annually increased production in our maritime possessions; and so much was this augmenting supply required, that for eight-and-twenty years the prices of English wools were maintained.

Importations of Foreign and Colonial Wool into the United Kingdom from 1818 to 1844, and prices of English Wools.

Years.	Duty.	Foreign Wool.	Colonial Wool.	Total.	Price of Southdown.	Price of Kent Long.
		lbs.	lbs.	lbs.	per lb.	per lb.
1818	3d. per lb.	24,720,139	—	—	2s. 6d.	2s. 0d.
1819	6d. per lb.	16,094,999	—	—	1 7	1 3
1820	"	9,653,366	122,239	9,775,605	1 5	1 4
1821	"	16,416,806	205,761	16,622,567	1 3	1 1
1822	"	18,859,265	198,815	19,058,080	1 3	0 11
1823	"	18,863,886	502,839	19,366,725	1 3½	1 0
1824	Dec. 1824:— 1d. per lb. of 1s. value ½d. per lb. under 1s. val.	22,147,540	416,945	22,564,485	1 2	1 1
1825	Colonial free	43,465,282	351,684	43,816,966	1 4	1 4
1826	"	14,747,103	1,242,009	15,989,112	0 10	0 11
1827	"	28,552,742	562,599	29,115,341	0 9	0 10½
1828	"	28,628,121	1,607,938	30,236,059	0 8	1 0
1829	"	19,639,629	1,877,020	21,516,649	0 6	0 9
1830	"	30,303,173	2,002,141	32,305,314	0 10	0 10½
1831	"	29,110,073	2,541,956	31,652,029	1 1	0 10½
1832	"	25,681,298	2,461,191	28,142,489	1 0	1 0½
1833	"	34,461,527	3,614,886	38,076,413	1 5	0 10½
1834	"	42,684,932	3,770,300	46,455,232	1 7	1 7½
1835	"	37,472,032	4,702,500	42,174,532	1 6	1 6
1836	"	57,814,771	6,425,206	64,239,977	1 8	1 8½
1837	"	38,945,575	9,434,133	48,379,708	1 3	1 3
1838	"	42,430,102	10,164,253	52,594,355	1 4	1 5
1839	"	44,504,811	12,875,112	57,379,923	1 4	1 5½
1840	"	36,498,168	12,938,116	49,436,284	1 3	1 2½
1841	"	39,672,163	16,498,821	56,170,974	1 0	0 11
1842	"	27,394,920	18,486,719	45,881,639	0 11½	0 10
1843	"	26,633,913	21,151,148	47,785,061	0 11½	0 11
1844	from June 6th, free	42,473,228	22,606,296	65,079,524	1 2	1 2
'845	"	"	"	76,828,152	1 4	1 3

Until the Australian colonists began to send fine wools to England, the Germans and Spaniards had almost a monopoly of the supply, and their prices at one time ranged from 10s. to 12s. per lb.; now they are not one-fifth of that sum. The prices of Australian fine wools are about 1s. to 1s. 6d. per lb.

The facts connected with the origin of Australian wool-growing will be interesting to many. In 1793 the late John M'Arthur, then captain in the corps serving in New South Wales, assumed that the grasses and climate of Australia were adapted for the rearing of Merino sheep, and in 1797 he obtained from captain Kent, R.N., three rams and five ewes, of pure breed, which were sent to the Cape of Good Hope by the Dutch government, but not being valued by the settlers, captain Kent brought them to New South Wales. Mr. M'Arthur immediately began to cross his coarse-fleeced sheep with the Merino, and in ten years his flock, which consisted originally of seventy common Bengal sheep, was increased to 4,000, although the wethers were slaughtered as they became fit for food. In 1803 Mr. M'Arthur returned to England, exhibited samples of his wool to a committee of manufacturers who happened to be then in London, which samples were much approved. On the 26th of July, 1803, he addressed a letter to Lord Hobart, stating at length the progress made in producing wool of a "softness superior to many of the wools of Spain, and certainly equal in every valuable property to the very best procured from thence."

On the 4th May, 1804, captain M'Arthur addressed a memorial on the subject to the committee of the Privy Council for trade; and on the 6th July, 1804, appeared before that committee, and stated his plans for rendering England independent of foreign countries for a supply of the best wools. The Privy Council encouraged the views of the enterprising colonist, who stated that he was ready to take the risk and expense on himself. All he required was an allotment of 10,000 acres of grazing land, and liberty to select thirty convicts as shepherds. The Privy Council finally, after hearing the evidence of governor Hunter, and other conclusive testimony, recommended that a reasonable grant of pasture land should be made to captain M'Arthur, instead of to a company, as proposed, and that the governor be instructed to feed the convicts on mutton, instead of salt provisions; for the

lords of the committee were "led to imagine and entertain hopes that wool of a fine quality may be produced in this colony; and that as wool of such fine quality is much wanted and desired by the manufacturers of cloth in England, it being mostly drawn, at this time, from a country influenced, if not dependent, on France, their lordships entertain no doubt that it is well deserving the attention of his Majesty's government, to encourage the produce of fine wool in the colony of New South Wales." King George the Third, who, at that time, paid great attention to agricultural and pastoral pursuits, entered into the patriotic views entertained by his Majesty's council, and captain M'Arthur obtained, from the Merino flock of the king, several ewes and rams, with which he returned, in 1806, on board a vessel appropriately named the *Argo*, to the land so fortunate in being adopted by him for the scene of his meritorious labours.

Such was the commencement of the rapidly-increasing flocks of fine-woolled sheep in Australasia, which now (1850), including all the southern colonies, number at least 12,000,000, which contribute annually about 25,000,000 lbs. to the manufacturers of the United Kingdom, and which, within the next five years, will most probably not furnish less than 50,000,000 lbs. yearly, whereby our labouring population will be enabled to exchange flimsy cotton garments for warm woollen clothing, better suited to our climate.

That this is not an exaggeration will be admitted, when we consider that New South Wales possessed, in 1843—sheep, 5,000,000; 1848 (January), 10,054,000. An increase of cent. per cent. in four years—*five million in four years*. The annual augmentation has been about 1,250,000, notwithstanding the prodigious number slaughtered for their tallow, as will be presently shown. Mr. Arthur Hodgson states the number killed, in 1847, at 181,000; and that 70,000 were exported to New Zealand and the islands of the Pacific. It is reasonable to infer, that the annual increase on eleven to twelve million sheep in the next five years, will be not less than 2,500,000 per annum, which will raise the number of sheep to nearly 25,000,000 in the year 1855: these flocks, at only two pounds of wool per fleece, would yield 50,000,000 lbs. weight of wool.

The following statement gives the quantity of wool annually shipped from New

South Wales, from 1807 to 1836, a period of five-and-twenty years:—

Year.	lbs.	Year.	lbs.	Year.	lbs.
1807	245	1821	175,433	1829	1,005,333
1808	562	1822	172,880	1830	899,750
1811	167	1823	198,240	1831	1,401,284
1816	32,971	1824	275,560	1832	1,515,156
1816	73,171	1825	411,600	1833	1,734,203
1817	13,616	1826	552,960	1834	2,246,933
1818	86,325	1827	407,116	1835	3,893,927
1819	74,284	1828	834,343	1836	3,693,241
1820	99,415				

This shows an augmentation from 245 to 3,693,241 lbs. In the annexed table the return is continued, and the value is added, proving, in twelve years, a quintupling in quantity, viz.—from 4,448,796 to 22,969,711 lbs., and a quadrupling in value:—

Year.	Quantity.	Value.	Year.	Quantity.	Value.
	lbs.			lbs.	
1837	4,448,796	£332,166	1843	12,704,899	£685,647
1838	5,749,376	405,977	1844	13,542,173	645,344
1839	7,213,584	442,504	1845	17,364,734	1,009,242
1840	8,610,775	566,112	1846	16,479,320	1,019,985
1841	8,390,540	517,537	1847	22,379,722	1,272,118
1842	9,428,036	595,175	1848	22,969,711	1,240,144

TALLOW promises to form nearly as valuable an article of export as wool; it is a branch of traffic which originated in the recent commercial depression of the colonists in New South Wales. In 1840–1 there was considerable speculation in the purchase of land by the colonists; and the money thus laid out was transmitted to England, for the conveyance of emigrants to the colony. Had the land been bought in the United Kingdom by capitalists here, the colonists would have been benefited; but the reverse was the case. Between November, 1840, and November, 1841, the local government withdrew about £260,000 from the colonial banks; and, in 1841, upwards of £300,000 was paid for immigration. The colony could have borne this abstraction of capital, if it had been gradual; but the suddenness of the withdrawal of so large a sum, necessarily brought on a monetary crisis, which the want of foresight on the part of the governor and authorities at Sydney, and their incapability of supplying any remedy, rendered most distressing in its consequences.

In 1841–2 the colonial banks, partly in self-defence, in the midst of a full swing of pastoral activity and commercial enterprise, suddenly reduced the amount of discounts; and, to use a familiar expression, brought the whole of the colonists “on their haunches.”

In 1841, the advances of the banks, chiefly on bills and promissory notes, was £2,582,203; in 1843 this sum was reduced to £1,583,137, and a large part of this consisted of “locks-up,”—or bills renewed from time to time. The importations from England had been excessive; quantities of articles, sufficient for two or three years’ consumption, were imported at once, and must be paid for; the price of wool had been falling for several years in England; added to this, the government raised the selling price of land, and, nearly simultaneously, transportation ceased—and with it, the annual supply of convict labour, and the large governmental expenditure furnished by the British exchequer. It was not surprising, therefore, that cash, or a representative medium of exchange, became exceedingly scarce in New South Wales—and, as a necessary consequence, the price of every commodity fell far below its intrinsic value; men were compelled to make any sacrifice, to try and meet their engagements—there was almost universal bankruptcy—and the power of the monied classes to ruin a nation or community, when that community is dependent for the daily interchange of all its wants, on a very limited amount of gold or silver coin, became fearfully apparent. Sheep, the staple of the colony, fell from ten shillings to sixpence or one shilling each; and, even at that price, were only received in barter, or in payment of debts; everything else, but the few sovereigns in the colony, fell in like proportion. So great was the distress, that most of the mercantile houses and persons reputed of great wealth, were declared insolvent: their numbers stood thus in—

	1842.	1843.	1844.	Total.
Sydney . .	600	535	221	1,356
Melbourne .	113	124	45	282
Total . .	713	659	266	1,638

According to an intelligent colonist, Mr. Westgarth, the collective debts of these 1,638 insolvent estates amounted to no less than three-and-a-half million sterling, and the assets were merely nominal; for, as he truly observes, “many extensive merchants and large proprietors beheld the ample substance they were once possessed of, gradually disappear with the reduced value of their land, live stock, and other property.” Mr. Braim mentions, that at the period of depression, he heard a rich man in Sydney state in a most lugubrious tone, that he had been obliged

to take, in payment of a debt, 10,000 sheep, at Moreton Bay, at 1s. each. So little did he think of his bargain, that he put them in flocks of from ten to fifteen hundred, and removed the ewes, to prevent the increase, and consequent addition to his expenses of management. Many of the large flock owners determined to slaughter their fat sheep and horned cattle, and boil them down, so as to obtain the largest quantity of tallow from the carcase, which, as meat, was valueless. The example was set by a stock owner named O'Brien, who rightly conceived, that the mere fat of the animals would be more valuable in England, than the entire animals were in New South Wales. The mode of "boiling down" consists in throwing the entire carcase, except the hind legs, of the sheep or bullock, into a large boiler or vat, and by the process of steaming, the whole of the fatty parts are extracted and received into casks, ready for shipment to England. The hind legs, which contain but little fat, are sold, and the price of good mutton is thus reduced to one penny, or even a halfpenny per pound.

The extent to which the slaughtering system has been carried, is shown in the following statement of the quantity of tallow and lard produced in New South Wales in 1848:—

Number of Boiling-down Establishments, Cattle, Sheep, &c., slaughtered, and Tallow and Lard produced.

Number of	Sydney, within the settled Dis.	Sydney, without settled Dis.	Port Phillip District.	Total.
Establishments	41	14	7	62
Sheep . . .	141,573	24,128	120,691	286,392
Horned Cattle	27,682	5,415	5,545	38,642
Tallow, cwts. .	49,311	11,530	27,725	88,567
Hogs . . .	23	33	11	58
Lard, cwts. .	875	990	200	2,065

The system has now been in operation for six years; in 1843, there was produced 5,680 cwts. of tallow, value £9,639; in 1848, 98,213, value £140,579.

Year.	Quantity.	Value.
	Cwt.	
1843	5,680	£9,639
1844	56,609	83,511
1845	71,995	102,746
1846	20,357	28,107
1847	69,690	108,186
1848	98,213	140,579

Mr. Gideon S. Lang, in a work on "Land and Labour in Australia," furnishes the following estimate of the wool and tallow

which will be produced when one-third of the area of the district of Port Philip is occupied, and the stock of the middle district of the colony has increased in the same proportion—sheep and cattle in the same ratio to each other as at present:—

—	Sydney.	Port Phillip.
Sheep.	8,631,250	5,000,000
Cattle	2,125,300	500,000
Cast five years old . . .	2,151,310	1,100,000
Consumption, export, & dead	774,907	562,200
Melted	1,377,373	537,800
Tallow (20 lb. per sheep, 186 lbs. per hd. of cattle)	33,493	8,900
Wool, 2½ lbs. per sheep . .	23,735,937	13,750,000

Value of the above produce in Britain—wool, 37,485,937lbs., at 1s. 3d. = £2,342,871; tallow, 42,393 tons, at £40 per ton = £1,695,720. Total—£4,038,591.

At no distant day, Australia will render us independent of Russia, for the supply of tallow, as it has already done of Germany or Spain, for the supply of wool.

WINE AND BRANDY. — The number of acres planted with the vine, and the produce thereof, on the 31st of March, 1849, was as follows:—

Counties.	Acres.	Wine. Gallons.	Brandy. Gallons.
SYDNEY DISTRICT:—			
Argyle	7	50	—
Bathurst	4	450	—
Bligh	3½	74	—
Brisbane	79	4,467	4
Camden	60	21,350	260
Cook	24	330	—
Cumberland	259	17,413	352
Durham	162	29,808	75
Georgiana	—	—	—
Gloucester	82	4,045	72
Hunter	19½	957	—
King	6	25	25
Macquarie	22	4,300	280
Murray	6½	30	—
Northumberland . . .	112	11,001	95
Phillip	1½	180	—
Roxburgh	25	2,560	—
St. Vincent	—	—	—
Stanley	2½	—	—
Wellington	—	—	—
Westmoreland	0½	—	—
Beyond settled Dis.	11	260	—
Total in 1848 . . .	887	97,300	1,163
„ in 1844	508	33,915	751
PORT PHILLIP DIS.:—			
Bourke	57	—	—
Grant	48	6,000	100
Normanby	3	306	—
Total	108	6,306	100
Gen. Total in 1848	995	103,606	1,263

Australia will become an extensive wine country; the grape thrives in every locality, although in some soils better than in others; and the wine made has not the earthy flavour peculiar to some of the Cape of Good Hope wines. The manufacture is yet in its infancy.

The Australian wines bear a strong resemblance to good Sauterne, Barsae, Hock, Claret, &c. Lieutenant-colonel M'Arthur recently visited several of the wine districts in Germany and France, selected experienced vine cultivators, and manufacturers of wine and brandy, whom he has sent out to the colony with their families; and he will thus have the honour of conferring on the colony a benefit nearly equal to that which his respected father conferred by the introduction of fine-woolled sheep. Sir T. L. Mitchell, the surveyor-general of New South Wales, in 1847 visited Spain, and obtained useful information on the mode of preparing raisins, that he might be still more extensively useful to the land of his adoption. The olive and mulberry are peculiarly fitted to the soil and climate of New South Wales; and olive oil and silk may, ere long, be added to its list of products. Indigo grows wild in several districts in New England, where the soil and seasons are well adapted for the growth of coffee, tea, cocoa, and sugar. Cotton and tobacco ought also to become very valuable articles of export. Moreton Bay, and the regions to the northward, to which Dr. Lang has drawn public attention, will doubtless, in time, possess great plantations of cotton, tobacco, rice, and other articles which we now receive from the United States. Australia can procure from India, from China, and from the islands of the Eastern Archipelago, any required quantity of free labour, skilled in the cultivation of these great staples of European consumption, at a price of fourpence or sixpence per day; and I confidently look forward to the period when

the intercourse between England and Australia will constitute one of the largest and most lucrative portions of the traffic of the British empire.

The extension of pasturage is furnishing an increasing supply of dairy produce, which will not only render the colonists independent of foreign supplies, but also yield a surplus for export. The decreasing imports and increasing exports of butter and cheese are thus stated, from 1843 to 1848:—

Year.	Imported.		Exported.	
	Quantity.	Value.	Quantity.	Value.
	lbs.		lbs.	
1843	248,170	£9,497	81,173	£3,488
1844	60,704	1,184	188,174	3,717
1845	22,216	579	172,368	4,313
1846	45,456	1,062	100,287	3,665
1847	10,164	413	253,880	5,977
1848	15,466	417	216,130	4,116

The cheese and butter made in New South Wales are excellent; "Mrs. Rankin's cheese," prepared at Bathurst, would sell well in England; other ladies are now turning their attention to a matter peculiarly within their province, and the markets of India and China will take off their hands whatever they can prepare.

Timber has not hitherto formed a large article of export; in the earlier condition of the colony, cedar and blue gum were its staple products; but other and more valuable items have usurped their place. The country around Moreton Bay must, however, contain abundance of good furniture wood, which is always in demand in England. The following shows the imports and exports of timber for several years into New South Wales. In the book on Western Australia the quality of the Australian woods will be stated:—

Imports for the under-mentioned years.

Year	Deals.	Other Timber.					Sandal wood.	Total Value.
		Sawn, &c.	Wrought.	Shingles.	Laths.	Paling		
	Quantity.	Quantity.	Quantity.	Quantity.	No.	No.	Tons.	
1843	12,327	{ 212,890 ft. 509 loads }	82 packages	3,000	115,000	172,000	107	£10,156
1844	2,951	{ 101,228 ft. 108 loads }	54 do.	{ 414,000 3 loads }	—	500,000	90	4,195
1845	{ 10,457 256 loads }	{ 604,524 ft. 541 loads }	5 prs. sashes	2,118,685	254,500	128,630	415	10,541
1846	31,256	1,255,569 ft.	—	{ 1,485,000 15½ loads }	461,750	392,570	44	10,278
1847	22,418	2,483,431 ft.	—	2,633,600	1,424,800	675,742	351	14,951
1848	17,952	2,652,970 ft.	—	4,199,000	1,320,900	767,915	50	16,347

Exports for the under-mentioned years.

Year.	Quantity of Cedar.	Quantity of Blue Gum, Pine, and other Timber.	No. of Treenails and Spokes.	Value.
1828	847,805 superficial feet . .	215,541 superficial feet . .	65,837	£11,428
1829	940,486 . . ditto . . .	608,647 . . ditto . . .	181,817	16,293
1830	368,830 . . ditto . . .	179,403 . . ditto . . .	23,959	5,218
1831	580,393 . . ditto . . .	416,857 . . ditto . . .	24,316	8,401
1832	418,930 . . ditto . . .	233,653 . . ditto . . .	186,831	6,132
1833	1,086,437 . . ditto . . .	147,170 . . ditto . . .	328,503	13,153
1834	899,492 . . ditto . . .	30,065 . . ditto . . .	212,467	7,941
1835	907,921 . . ditto . . .	145,628 . . ditto . . .	178,969	10,489
1836	1,409,467 . . ditto . . .	3,778 . . ditto . . .	35,094	14,385
1837	116,828 . . ditto . . .	18,828 . . ditto . . .	62,989	14,463
1838	699,066 . . ditto . . .	9,000 . . ditto . . .	73,450	6,382
1839	729,001 . . ditto . . .	823 deals } 15 logs }	40,588	8,815
1840	1,250,786 . . ditto . . .	151,500 superficial feet . .	4,350	20,971
1841	513,139 . . ditto . . .	1,000 . . ditto . . .	26,890	7,004
1842	522,882 . . ditto . . .	27,404 . . ditto . . .	55,644	5,800
1843	944,121 . . ditto . . .	10,020 . . ditto }	155,294	9,813
		30 logs . . . }		
1844	1,222,533 . . ditto . . .	99,500 superficial feet }	105,428	8,825
	214 pieces }	33 logs }		
	24 logs }			
1845	781,415 superficial feet . .	73,300 feet . . . }	105,908	8,074
		241 logs, &c. . . . }		
1846	956,515 . . ditto . . .	390,006 feet	113,972	7,851
1847	953,995 . . ditto . . .	46,850 feet	165,648	7,333
		22,150 feet }		
		20 pieces }		
1848	863,507 . . ditto . . .	7,600 shingles and palings }	76,201	5,675

Note.—1844, Also a large quantity of Timber, the measurement of which was not stated when entered at Custom House.

The manufactories in 1848 were:—

Manufactories, &c.	Sydney.	Port Phillip.	Total.
Grinding and dressing grain:—			
Steam	57	8	65
Water	56	7	43
Wind	25	1	26
Horse	39	2	38
Total	157	18	175
Distilleries	2	—	2
Rectifying and compounding	2	—	2
Breweries	12	9	21
Sugar refining	2	—	2
Soap	15	3	18
Tobacco and snuff	4	—	4
Woollen cloth	6	—	6
Hat	4	—	4
Rope	4	—	4
Tanneries, &c.	33	7	40
Salt	2	—	2
Starch	1	—	1
Blacking	2	—	2
Patent oatmeal and groats . .	1	—	1
Salting establishments . . .	1	1	2
Meat preserving ditto . . .	3	—	3
Potteries	7	—	7
Glass works	—	1	1
Smelting ditto, copper . . .	1	—	1
Iron and brass foundries . .	11	2	13
Patent slip for ships . . .	1	—	1
Steam vessels	17	—	17
Fire engines	3	—	3

At the woollen manufactories there were made, in 1847, of cloth, 18,484 yards; of tweeds, 156,604 yards; and blankets, 424. The *tweeds*, an excellent fabric, command a ready sale, and are now becoming an article of export; the manufacture will, doubtless, be extended. The materials for making soap abound; the thirteen soap manufactories made, in 1848, 24,180 cwt. The tobacco manufactured is about 1,000 cwt. annually, and as the climate is well suited for its culture, the preparation of the "weed" will, doubtless, be improved. One sugar-refining establishment, in 1848, turned out 26,000 cwt. of refined sugar. The preceding list of manufactories shows how greatly the colonists desire to render themselves independent of supplies which increase their imports, and for which they have not yet adequate exports. In the article of blacking, alone, they say the value of imports has been reduced by £10,000 annually; it will, however, be a sounder policy, to increase the number and quantity of their exports for the English market, by which they will be enabled to procure manufactured articles at a far cheaper rate than they could be prepared in the colony.

The minerals will ultimately be a source

of wealth. The coal mines in the colony, their produce in 1848, and the value of it, was :—

Mines.	Coal.	Value.
	Tons.	
Aust. Agric. Co. Newcastle	34,381	£11,737
Ditto at Lake Macquarie . . .	1,700	510
Ditto at Burwood	1,738	608
Ditto at Maitland	7,023	1,265
Ditto at Morpeth	205	35
Ditto at Moreton Bay	400	120
Total	45,447	14,275

All but the first-named mine are in the early stages of their working; some only commenced in 1848.

There are five copper mines commencing work, viz.—at Bathurst, Yass, and Molong. The Fitzroy iron mine at Berrima has had its machinery put up and shaft sunk in 1848. In the language of the official report to government, “the ore of this mine has the peculiar property of turning into pure steel when smelted.” If gold, as is expected, be found in large quantities, another valuable article of export will be provided; for the precious metal will henceforth become a merchantable commodity, and rank among exchangeable products. Gold is a raw product, and answers the same purpose as wool, tallow, oil, timber, copper, iron, or any other article, in enabling its finders to purchase such merchandize as they may require. If, therefore, gold exists in Australia, to an extent at least equal to that found in California, there can be no reason for preventing the colonists gathering it. Every pound of gold raised in the mines or valleys of the Australian Alps, will enable the colonist to purchase a pound’s worth of English manufactures. The currency of the United Kingdom is very far below the amount required for a remunerating interchange of labour and goods. In England, the whole gold, silver, copper, and bank-note currency, in *actual circulation*, is not £3 sterling per head; in Scotland, it is nearly £5; in Ireland, it does not amount to much more than *ten shillings* for each inhabitant: whereas a full currency ought, at the very least, be equal to £10 sterling per head, otherwise the nation is exposed to the vicissitudes arising from the alternate states of a deficiency or a plethora of money: panic succeeds prosperity in a vicious circle, rendering commerce a gambling game, and enterprise a hazardous speculation. The

production of large quantities of gold in Australia would, therefore, be a great gain to the colonists, and a boon of incalculable value to the people of England.

The important subject of emigration will be fully discussed in the last volume of this work, and a fair examination be made of the relative advantages and prospects of the several colonies for different classes of emigrants; it will consequently be only desirable to give here the annexed statement of the average prices of food, and the general wages of labour in New South Wales during the year 1848, by which intending emigrants of the poorer class can judge the cost of living, and the means available for its support. It is calculated that New South Wales could with ease afford remunerative employment annually to 10,000 additional able-bodied immigrant labourers for the next ten years; and there is no country better adapted for a man whose power of manual labour is his sole property, and who possesses the indispensable requisites of honesty, sobriety, and persevering industry:—

Average Prices of Produce during 1848 at Sydney :
—Wheaten flour, 10s. to 12s. per 100 lbs.; wheat, 4s. to 4s. 6d. per bushel imperial; wheaten bread, 2½d. to 3d. loaf of 2 lbs.; maize, 1s. 5d. to 1s. 10d. per bushel; barley, 2s. 6d. to 3s. 6d.; oats or rye, 3s. 6d. to 4s. 6d.; potatoes, 3s. to 6s. per cwt.; hay, £4 to £6 per ton; straw, £2 5s. to £2 10s.; horned cattle, £2 5s. to £2 10s. per head; horses, £4 to £20 each; sheep, 5s. to 7s. 6d. per head; goats, 5s. to 15s. each; swine, 7s. 6d. to £2; milk, 6d. per quart; butter, fresh, 6d. to 1s. per lb.; salt, colonial, 5d. to 10d.; cheese, colonial, 4d.; fresh beef, 1½d. to 2d.; mutton, 2d.; fresh pork, 4d. to 5d.; rice, 2½d.; coffee, 8d.; tea, 1s. 4d.; moist sugar, 2½d.; salt, 1d.; wine (Cape), 4s. per gallon; brandy, 16s.; rum, imported, 10s.; beer, colonial, 1s. 4d.; tobacco, imported, 3s. 2d. per lb.; tobacco, colonial, 1s. 3d.

Wages of Labour.—Domestic, male, £18 to £40 per annum; female, £12 to £25; predial, £18 to £25; trades, £35 to £40.

Weights and Measures, as in England.

Fruits and Vegetables.—The fruits and culinary vegetables of Australia are numerous and of excellent quality. In a small garden at Paramatta I had the apple, pear, peach, nectarine, apricot, loquat, quince, cherry, plum, melon, pine-apple, figs, citron, orange, grape, mulberry, walnut, gooseberry, strawberry, raspberry, and currant, all in full perfection. So abundant is the peach, that, in many places, I have seen the farmers feeding their pigs with the windfalls of their teeming orchards. My lamented friend, the late Allen Cunningham, informed me, that during his explorations in the interior, he and his men were often refreshed

and nourished by finding peach-trees scattered about in the forest, where they had grown from stones planted by bush-rangers, or from having been dropped by birds. In grateful recognition of the benefits thus received, as a weary and fainting traveller, Cunningham always carried about him a bag of peach stones, which he planted on every occasion, in suitable places. The small settlers make a cider and a brandy from their peach fruit.

Among other fruit-trees, besides those above-named, are the almond, which flourishes remarkably well; banana, in the more northern positions. The fig produces two crops in the year, without any further trouble than that of planting: the fruit is of the finest flavour, abundant in quantity, presses well, and will probably become a valuable article of export. Grapes, of every variety, are very plentiful, and are now being dried as raisins, as well as extensively manufactured into wine, brandy, and vinegar. The Chinese fruit, termed loquats, are as fine as any I ate in China. While on this subject, I venture to recommend to the colonists the introduction of the lichee, and other excellent fruit, which I obtained at Foochoofoo and at Shanghai. Our consuls at those stations could readily procure the young fruit-trees. Melons, water and sweet, grow almost wild in New South Wales. The farmers scatter a few seeds among their corn, and they thrive so luxuriantly as to be scarcely an article of sale, except in the towns. They sometimes attain a size of twenty-four pounds weight. The lemon flourishes as standards or as hedges. The orange arrives at a degree of perfection greater than I have witnessed in any other country excepting Malta. A richer sight can hardly be conceived than Mr. Suttor's orangerie near Paramatta. If I remember rightly, I walked through one grove of large orange trees, in full bearing, which was more than a quarter of a mile in length; and I believe the respected proprietor found it a very profitable article of production. Mr. Mobbs also realized a handsome fortune from his orangerie. The mulberry thrives in every part of the colony; and its growth may be augmented to an almost indefinable extent for the feeding of silkworms; but I would recommend the obtainment of a peculiar species of mulberry which grows near Nankin, and in the regions bordering the great river Yangt-tse-kiang, which is found by the experienced Chinese

to yield the finest silk. The neighbourhood of Port Stephens and Port Macquarie ought to be among the most productive silk countries in the world; and to render them so skilled, Chinese might be induced to settle in the country, bringing with them the mulberry and best silkworms. The olive affords great promise: wherever the vine yields well, there the olive generally thrives. I noticed how this valuable commercial shrub flourished at Ithaca, Cephalonia, and along the coast of the Morea, where the soil and climate were very similar to those of New South Wales. The walnut, filbert, and chestnut are in perfection, especially the filbert, which are of a size and flavour unsurpassed. All the culinary vegetables of Europe are of large size and excellent flavour. Potatoes, carrots, parsnips, turnips, onions, peas, beans, cabbages, spinach, artichoke, asparagus, celery, cucumbers, radishes, seakale, yams, rhubarb, &c., would be highly prized in Covent-garden market. The various beautiful flowers which adorn the gardens of England are extensively cultivated in New South Wales, where they attain a magnitude and beauty which add to their natural charms. The saying, that the fruits of Australia are without flavour, and the flowers devoid of odour, refers to those of the country, and not to the introductions from Europe. The annual exhibitions of the "Australian Floral and Horticultural Society," at Sydney, fairly rival those of Chiswick or Regent's-park; and the botanical gardens at Sydney, the governor's gardens at Paramatta, those of Mr. M'Arthur, and other colonists, are equal, in extent and variety, to many of the best gardens in the United Kingdom. The Englishman carries his love of fruits and flowers to whatever country he makes his home; and, in Australia, he has full scope for the gratification of his refined taste and habits.

MARITIME COMMERCE.—The trade of New South Wales was for many years in a very unsatisfactory state; the imports were in value about five times that of the exports, and the balance of payments in exchange was defrayed by bills on her majesty's treasury in London to meet the convict expenditure in the colony. There were then few exportable articles, and it was feared that no staple products available for transmission to England could be created. By extraordinary energy these difficulties have been surmounted; there is now no convict expenditure from the home exchequer, and an

examination of the annexed complete returns of the value of imports and exports for the last twenty years will shew, that they are now balanced the one against the other.

Imports into New South Wales and Port Phillip, 1828 to 1848.

Year.	From Great Britain.	From British Colonies.	From South Sea Islands.	From Fisheries.	From United States.	From other Foreign States.	Total.
1828	£399,892	£125,862	—	£44,246	—	—	£570,000
1829	423,463	135,486	—	42,055	—	—	601,004
1830	268,935	60,356	—	91,189	—	—	420,480
1831	241,989	68,804	—	179,359	—	—	490,152
1832	409,344	47,895	—	147,381	—	—	604,620
1833	434,220	61,662	—	218,090	—	—	713,972
1834	669,663	124,570	—	197,757	—	—	991,990
1835	707,183	144,824	£1,420	177,365	£13,902	£70,161	1,114,805
1836	794,422	220,254	1,972	135,730	22,739	62,289	1,237,406
1837	807,264	300,313	1,764	80,441	9,777	97,932	1,297,491
1838	1,102,127	309,918	5,548	71,506	8,066	82,112	1,579,277
1839	1,251,969	576,537	3,863	186,212	23,093	194,697	2,236,371
1840	2,200,305	431,146	1,348	104,895	24,164	252,331	3,014,189
1841	1,837,369	332,296	24,361	97,809	35,282	200,871	2,527,988
1842	854,774	298,201	10,020	64,999	20,117	206,948	1,455,059
1843	1,034,942	227,029	22,387	42,579	12,041	211,566	1,550,544
1844	643,419	153,923	10,624	32,507	17,187	73,600	931,260
1845	777,112	237,759	40,048	43,503	7,416	128,016	1,233,854
1846	1,119,301	262,943	21,799	56,461	4,459	165,559	1,630,522
1847	1,347,241	388,724	6,919	41,557	1,650	196,032	1,982,023
1848	1,084,054	283,787	2,642	73,715	2,065	130,287	1,556,550
1849							

Exports from New South Wales and Port Phillip, 1828 to 1848.

Year.	To Great Britain.	To British Colonies.	To South Sea Islands.	To Fisheries.	To United States.	To other Foreign States.	Total.
1828	£81,008	£4,845	—	£6,708	—	—	£90,050
1829	146,283	12,692	—	15,821	—	—	161,716
1830	120,559	15,597	—	—	—	—	141,461
1831	211,138	60,354	—	16,949	—	—	324,168
1832	252,106	63,934	—	19,545	—	—	384,344
1833	269,508	67,344	—	—	—	—	394,801
1834	400,738	128,211	—	28,729	—	—	587,640
1835	496,345	83,108	£2,696	39,882	£18,594	£3,011	682,193
1836	513,976	136,596	9,628	30,180	13,697	2,625	743,624
1837	518,951	157,975	485	54,434	10,617	17,592	760,854
1838	583,154	160,640	7,137	33,988	11,324	6,525	802,768
1839	597,100	289,857	1,347	34,729	18,568	7,175	948,776
1840	792,494	520,210	6,621	27,864	27,885	24,618	1,399,692
1841	706,336	238,948	13,144	18,417	4,837	41,715	1,023,397
1842	685,705	298,023	3,005	22,862	17,101	40,715	1,067,411
1843	825,885	285,756	17,934	18,827	—	23,918	1,172,320
1844	854,903	236,352	14,106	11,623	—	11,131	1,128,115
1845	1,254,681	276,788	17,656	1,593	—	5,068	1,555,986
1846	1,130,179	328,922	13,441	590	—	8,407	1,481,539
1847	1,503,091	335,137	14,231	—	—	17,587	1,870,046
1848	1,483,224	335,887	6,944	—	—	4,313	1,830,368
1849							

The relative proportion of the shipping engaged in the trade of Sydney, New South Wales, and of Melbourne, Port Phillip, is thus shown by the tonnage entering inwards from Great Britain, the British colonies, and elsewhere, in 1848 :—

—	From Great Britain.		From British Colonies.		From South Sea Islands.		From Fisheries.		From United States.		From other Foreign States.		Total.	
	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.
Sydney . .	71	34,309	106	23,877	233	45,173	23	2,695	63	17,473	1	406	5	1,018
Port Phillip	48	23,295	10	956	406	42,349	—	—	—	—	—	—	469	67,618
Total .	119	57,604	116	24,833	639	87,522	23	2,695	63	17,473	1	406	35	8,771

The number and tonnage of vessels which entered inwards in the colony of New South Wales (including the district of Port Phillip), from the year 1837 to 1848, inclusive, was—

Year.	From Great Britain.		From British Colonies.				From South Sea Islands.		From Fisheries.		From United States.		From other Foreign States.		Total.	
	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.
1837	66	21,816	36	5,480	233	33,751	5	581	48	13,004	5	1,220	17	4,262	400	80,114
1838	102	41,848	38	4,291	241	34,469	6	616	31	7,928	1	274	0	2,351	428	91,777
1839	137	58,123	51	8,368	290	45,928	7	836	36	9,321	4	1,177	38	11,721	563	135,474
1840	190	80,806	68	13,123	347	53,625	11	750	27	8,087	8	2,520	63	20,047	709	178,958
1841	251	106,332	48	7,601	322	43,922	3	358	23	6,163	13	4,754	54	14,648	714	183,778
1842	137	55,144	81	14,085	282	42,365	19	2,902	20	5,806	7	2,762	82	20,857	628	143,921
1843	87	35,914	43	6,229	325	43,934	25	4,194	30	7,967	5	1,116	43	11,510	558	110,864
1844	78	34,765	54	7,189	226	31,195	13	1,831	27	7,888	3	1,005	16	3,666	417	87,539
1845	80	29,954	62	6,237	364	47,532	24	2,612	37	11,900	1	243	29	6,874	597	105,352
1846	84	36,761	65	10,865	475	57,485	27	3,005	79	24,375	1	370	36	8,606	767	141,467
1847	88	37,941	75	10,516	565	69,614	25	2,443	78	22,558	1	160	46	11,672	878	154,904
1848	119	57,604	116	24,833	639	87,522	23	2,695	88	17,473	1	406	35	8,771	996	199,304

DUTIES levied under the authority of Acts of Parliament—(1.) Upon all spirits made or distilled in the colony, 3s. 6d. per gallon; (2.) Upon all rum or whisky imported, 3s. 6d. per gallon; (3.) Upon all other spirits and liqueres whatsoever imported, 6s. per gallon; (4.) Wine imported, fifteen per cent. additional value; (5.) Tea, sugar, flour, meal, wheat, rice, and other grain and pulse imported, 5s. per cent. additional value; (6.) Tobacco unmanufactured, 1s. 6d. per lb.; (7.) Tobacco manufactured, 2s. 6d. per lb.; (8.) All other goods, wares, and merchandize, not being the produce or manufacture of the United Kingdom, imported into the colony, ten per cent. additional value. Wine imported for the use of military and naval officers on full pay, *free of duty*.

There are also wharfage rates levied at public and private sufferance wharfs, and on all descriptions of goods imported: for instance, at public wharfs, on beer, per hhd. 6d.; on wine or spirits, 1s. per leaguer; on sugar, 1s. 4d. per hhd.; on unenumerated goods, 2s. 4d. per ton. There is also a rate levied of one halfpenny per ton per diem on vessels unloading or refitting, beyond a certain number of days; for instance, thirty-five days are allowed free for a ship of 500 tons.

Custom House Charges.

Description.	Custom House Charges.		Light House Dues.
	Entry.	Clear.	
For the entry inwards or clearance, outwards of ships or vessels (vessels under 50 tons registered in Sydney excepted); for any steam vessels in the coasting trade from one port to another of New South Wales.	1s. 3d.	1s. 3d.	0s. 0 1/2d.
For every other vessel so emptied above 50 and not exceed. 100 tons	2 6	2 6	2 0
For every other vessel so emptied above 100 tons	7 6	7 6	0 2
For every other ship or vessel . .	15 0	15 0	0 2

A Tonnage Duty is levied of 3d. per ton on all vessels above fifty tons entering any port in the colony, unless the same shall have been paid at any other port of the colony within the previous four months. Coasting vessels pay only once a-year.

Harbour Dues, varying from 5s. on vessels under fifty tons, to 30s. on vessels of 500 tons and upwards, are levied on entry of harbour, or on shifting anchorage, not for the purpose of leaving port. Coasting vessels from one port of the colony to another exempted.

The value of the trade in articles of British and British colonial produce and manufacture, is shewn in a return only complete for the last five years. It includes, as does the previous and subsequent statements, Port Phillip district:—

Imports.

Year.	United Kingdom.	British Dominions.	Foreign States.	Total.
1844	£629,510	£154,572	£147,178	£931,260
1845	786,514	156,491	290,849	1,233,854
1846	1,111,238	88,638	430,646	1,630,522
1847	1,269,183	95,118	617,722	1,982,023
1848	1,029,926	114,900	411,724	1,556,550

Exports.

Year.	New South Wales.	United Kingdom	British Dominions.	Foreign States.	Total.
1844	£864,709	£119,197	£64,266	£79,943	£1,128,115
1845	1,269,062	100,901	110,160	75,863	1,555,986
1846	1,201,433	120,424	80,499	79,183	1,481,539
1847	1,649,031	136,385	15,865	68,765	1,870,046
1848	1,621,509	127,368	22,220	59,271	1,830,368

It appears from the foregoing that imports from the United Kingdom of British produce and manufacture in 1848 were, in value, upwards of £1,000,000 sterling, or more than £5 per head of the population. The imports into the United States of British goods do not amount to ten shillings per head.

The increase of the imports of New South Wales between 1835 and 1840 was very remarkable; a few items will shew the progress of the colony in five years:—

Agricultural implements, in 1835, *nil*; in 1840, £4,565; apparel and slops, £58,658 and £144,890; bacon and hams, 44,373 and 675,785 lbs.; beef and pork, 2,544 and 19,766 barrels; beer and ale, 421,697 and 1,292,701 gallons; books, £4,699 and £12,791; butter, 74,090 and 338,775 lbs.; cabinet and upholstery ware, £4,026 and £16,186; coffee, 183,803 and 469,457 lbs.; copper (sheet and old), 41,581 and 358,788 lbs.; cordage, 3,642 and 10,103 cwt.; corn and wheat, 101,283 and 224,021 bushels; other grain, 21,161 and 76,276 bushels; wheat and flour, 3,672 and 21,882 bushels; cotton manufactures, £81,196 and £142,150 (in 1839, £230,775); earthenware, £6,820 and £20,179; fruit, of all sorts, £2,597 and £16,356; glass manufactures, £36,822 and £63,425; haberdashery, £22,510 and 66,713; hardware and cutlery, £18,253 and £79,970; hats, £12,777 and £23,245; hops, 10,332 and 126,696 lbs.; unwrought iron, 2,758,560 and 8,593,618 lbs.; wrought iron, £20,235 and 67,943; lead and shot, 315,590 and 1,104,609 lbs.; leather manufactures, £7,216 and £32,593; linen manufactures, £29,454 and £86,955; machinery, *nil* and £8,493; medicines, £708 and £17,230; cocoa-nut oil, *nil* and 14,606 gallons; painters' colours, £7,223 and £15,545; pickles and sauces, £7,223 and £15,545; rice, 859,060 and 7,617,716 lbs.; saddlery, £5,314 and £22,417; salt, 76,278 and 154,322 bushels; silk manufactures, £21,927 and £44,590; soap, 399,754 and 2,656,790 lbs.; spirits of all sorts, 327,990 and 627,476 gallons; stationery, £11,755 and £36,744; raw sugar, 5,176,730 and 11,269,856 lbs.; tea, 1,311,357 and 1,189,100 lbs.; tobacco, £13,194 and £78,340; wine, of all sorts, 313,427 and 494,285 gallons; woollen manufactures, £33,348 and £111,979. Aggregate value of imports, £976,091 and £2,548,775; aggregate value of exports, £675,226 and £1,289,036. Sheep's wool, 3,908,177 and 9,541,474 lbs.; tallow, 12,026 and 48,874 lbs.; number of sheep and swine, 2,164 and 24,163; number of neat cattle, 225 and 3,365.

Although the aggregate value of the imports exceeded that of the exports, yet there was a large increase not only of the staple products of the colony, but also of many imported articles, which passed through New South Wales as a *dépôt in transitu* to other surrounding countries. I do not know a similar rapid increase of commercial prosperity in any other country, and but for the injurious imperial legislation and orders from England, this wonderful prosperity would most probably have remained unchecked, and England would have participated in the welfare of its distant dependency.

The return of articles imported into the Sydney district alone (exclusive of Port Phillip) during the year 1847, gives the estimated value in the colony at £1,544,327, and for 1848 £1,182,874. An enumeration of some of the principal articles imported from Great Britain during the year 1848

will give a good idea of the importance of a colonial trade to England; how it enters into various branches of manufactures, and how the consumption of goods made at home fosters and promotes a taste, which must increase, and which materially tends to create a preference for English over foreign goods. During the year 1848, 117 *distinct articles* were imported into Sydney from Great Britain; I select from the list before me a few of the leading articles, shewing the quantities imported. Excepting sugar, 9,988 tons, and tea 2,108,916 lbs. (value £71,353 and £26,142,) nearly every other article was from the United Kingdom.

Quantity and Value of some of the Articles of British Produce imported into the Sydney District during the year 1848.—Alkali (soda), 3,325 cwt., £2,188; apparel and slops, 1,507 bales, £55,510; ammunition—gunpowder, 34,466 lbs., £1,295; shot, 964 cwt., £1,009; bags and sacks, 376 bales, £4,205; beer and ale, 475,433 gallons, £54,804; blacking, 331 casks, £892; blankets and counterpanes, 150 bales, £5,661; brushware, 141 packages, £2,312; canvas, 466 bales, £7,867; carpeting, 118, £2,648; carriages and carriage materials, 67 packages, £1,652; painters' colours, 4,001 kegs, £4,883; copper, 2,341 cwt., £10,058; cordage and rope, 3,835, £3,674; corks and bungs, 271 bales, £1,305; cottons, 1,696, £64,919; drugs and medicines, 1,369 cases, £9,594; earthenware and china, 1,090 crates, £10,284; salt fish, 833 barrels, £1,632; furniture, 928 packages, £3,258; glass and glassware, 3,685, £8,502; grindery, 86 casks, £1,566; haberdashery, 1,527 cases, £73,597; hardware and ironmongery, 7,800 packages, £65,029; hats, caps, and bonnets, 365 cases, £6,730; hops, 925 pockets, £3,703; horse hair, 56 casks, £1,248; hosiery and gloves, 262 cases, £11,829; musical instruments, 101 cases, £3,708; iron and steel, 2,451 tons, £22,533; jewellery, 32 cases, £2,529; lead, 165 tons, £3,022; unmanufactured leather, 32 cases, £1,230; boots and shoes, 624 trunks, £13,529; linens, 1,567 cases, £50,272; lucifer matches, 99 cases, £975; machinery, 99 packages, £1,484; malt, 3,511 casks, £2,245; millinery, 93 cases, £3,833; iron nails, 2,253 kegs, £3,188; copper nails, 652, £1,821; oil cloth, 20 cases, £257; oilman's stores, 9,644 packages, £28,927; perfumery, 100 cases, £1,291; tobacco pipes, 2,408 boxes, £2,454; pictures and paintings, 41 cases, £1,256; pitch, tar, and resin, 1,957 barrels, £878; plate and plated ware, 28 cases, £1,284; saddlery and harness, 197 cases, £6,368; salt, 3,715 tons, £9,403; ship chandlery, 68 packages, £666; shoos and staves, 13,404 bundles, £133; silks, 131 cases, £12,348; number of slates, 41,000, £170; spirits—brandy, 118,819 gallons, £28,316; rum, 223,706, £26,406; gin, 42,669, £8,954; whisky, 9,480, £2,425; liqueurs, 1,212, £403; starch and blue, 499 cases, £1,176; stationery and books, 1,891 cases, &c., £33,156; tin and tinware, 1,296 boxes, £2,456; tobacco, cigars, and snuff, 572,406 lbs., £10,968; toys and turnery, 243 cases, £3,315; turpentine and varnish, 2,406 gallons, £371; twine and thread, 98 packages, £1,542; umbrellas and parasols, 22 cases, £1,203; vinegar, 21,946 gallons, £1,368; watches and clocks, 81 cases, £415; wine, 302,741 gallons, £37,918; woollens, 1,508 bales, &c., £57,365; woolpacks and bagging, 471 bales, £8,350; zinc, 910 cwt., £228.

The principal exports for 1848, from Sydney alone, were—wool 12,445,048 lbs., value £683,628; woollen manufactures (Tweeds), 59 packages, value £1,468; tallow, 3,565 tons, £102,611; horses, 1,181, £14,137; horned cattle, 10,208, £16,457; sheep, 25,331, £8,737 (about 6s. 10d. per sheep); sperm oil, 1,186 tuns, £64,230; black whale oil, 196 tuns, £3,177; whalebone, 11 tons 2 cwt., £1,385; skins of neat cattle, 1,308 tons, £17,498; soap, 121 tons, £2,716; cedar, 863,307 feet, £5,133; leather, unmanufactured, 108 tons, £5,702; maize, 27,058 bushels, £3,063; butter and cheese, 81 tons 9 cwt., £2,836; tallow candles, 69,804 lbs., £1,117; coals and coke, 6,266 tons, £2,980; carts and waggons, 244, £2,010. Of the total exports nearly 1,000,000 sterling (£963,590) consist solely of the produce of the colony: out of £1,155,009, total exports, the amount sent to Great Britain was £901,869, to New Zealand £163,938, and to other British possessions £78,210.

There are other ports in the Sydney district which are now commencing a direct trade with England and other places. The

exports from the port of Newcastle in 1847 were valued at £14,112, and included 2,450 tons of coals, value £884, or 7s. 2d. per ton; 3,484 sheep, 379 horned cattle, 58 horses, 2,000 lbs. of flour, 102 bushels of barley, 2,748 lbs. of maize, ten and a half tons of hay, and other articles were all sent to New Zealand. To England were sent from this new port in the same year—wool 169,611 lbs., value £9,435; tallow, 30,428 lbs., value £600; The trade of Melbourne will be given when describing Port Phillip.

The ports of Australia, Van Diemen's Island, and New Zealand, are favourably situated for carrying on the whale fishery in the southern hemisphere. Since 1845 whalers have been exempted from port charges in Sydney harbour, and the following is a return of the ships and vessels engaged in the fisheries that have visited Port Jackson during the last five years; distinguishing those that are colonial, British, or foreign, with the tonnage of each description, and the estimated value of the cargoes disposed of by the last-mentioned class for payment for repairs, refitting, and refreshment:—

Year.	Colonial Vessels.		British Vessels.		Foreign Vessels.		Description and Value of Cargo disposed of by Foreign Ships.			
	Number.	Tonnage.	Number.	Tonnage.	Number.	Tonnage.	Sperm Oil.	Black Oil.	Whalebone.	Value.
1844	13	3,052	3	1,219	12	3,617	Tuns. 122	Tuns. 152	Cwt. 35	£4,993
1845	15	3,444	7	2,685	15	5,345	37	122	147	4,269
1846	16	3,894	9	2,287	55	18,147	203	30	129	6,981
1847	23	5,345	4	1,137	43	13,866	368	192	673	15,804
1848	26	613	1	267	37	11,203	158	8½	5	4,340

The whale and seal fisheries of New South Wales have of late years diminished; the whale is very migratory, and seems to have endeavoured to elude his persevering pursuers by taking refuge in the Northern Pacific,

where, for the last few years, the fish have been found in great numbers on the coasts of Japan and near Saghalien. The value of the New South Wales fisheries is thus shewn for eighteen years:—

Year.	Sperm Whale.	Black Whale.	Whalebone.		Seal Skins.	Value.
	Tuns.	Tuns.	Tons.	Cwt.	Quantity.	
1828	348	50	—	—	7,647 in number	—
1829	885	—	—	—	12,350 "	£94,101
1830	1,282	518	—	—	5,460 "	115,780
1831	1,914	1,004	—	—	4,972 "	—
1833	3,183	420	—	—	2,465 "	169,278
1836	1,700	1,178	—	—	386 "	126,085
1837	2,559	1,565	77	—	107 "	183,122
1838	1,891	3,055	174	—	3 cases	197,644
1839	1,578	1,229	134	14	7 "	172,315
1840	1,854	4,297	250	—	474 in number	224,144
1841	1,545	1,018	84	13	41 "	127,470
1842	957	1,171	60	5	162 "	77,012
1843	1,115	190	22	8	155 "	72,989
1844	810	526	15	18	3 bales	57,493
1845	1,352	571	21	13	2 casks, 10 Skins	96,804
1846	1,064	344	17	9	—	70,126
1847	1,214	331	8	3½	—	80,528
1848	1,186	196	11	2	4 cases	68,969

The number of ships engaged in the whale fishery in 1848, in connection with New South Wales, was 64; viz., 37 foreign; 3 British; 24 colonial: and the produce—sperm oil, 1,274 tons, value £67,005; black oil, 389 tons, £9,180; whalebone, 306 tons, £1,472. Total value — £77,652. At Port Phillip there were four boats engaged, which collected 15½ tons of oil, value £235; whalebone, 6 tons 6 cwt.

The increase of the shipping entering the ports of New South Wales has been very great since 1828:—

Year.	Number.	Tons.
1828	137	32,559
1829	158	37,342
1830	157	31,225
1831	155	34,000
1832	189	36,020
1833	210	50,144
1834	245	58,532
1835	266	63,019
1836	269	65,415
1837	400	80,114
1838	428	91,777
1839	560	135,474
1840	709	178,958
1841	714	183,778
1842	628	143,921
1843	558	110,864
1844	417	87,539
1845	597	105,352
1846	767	141,467
1847	878	154,904
1848	996	199,304

In twenty years the number of ships increased seven-fold, and the tonnage six-fold. Since 1848 the shipping and trade of the colony have been very largely augmented.

The number and tonnage of vessels built and registered in the colony have been:—

Year.	Vessels Built.		Vessels Registered.	
	Number.	Tons.	Number.	Tons.
1834	9	376	19	1,852
1835	7	303	21	2,267
1836	5	301	39	4,560
1837	17	760	36	3,602
1838	20	808	41	6,329
1839	12	773	79	10,862
1840	18	1,207	98	12,426
1841	35	2,074	110	11,250
1842	26	1,357	89	9,948
1843	47	1,433	92	7,022
1844	18	519	87	8,087
1845	18	1,042	98	9,376
1846	28	1,032	83	4,895
1847	36	2,284	104	9,428
1848	28	1,561	103	7,584

The numbers respectively built and registered during 1848 in the Sydney and Port Phillip districts, were—

District.	Ships Built.		Registered.		
	No.	Tons.	No.	Tons.	Men.
Sydney . . .	26	1,281	87	6,618	336
Port Phillip .	2	280	16	585	80
Total .	28	1,561	103	7,584	416

I have now recounted the rise and progress up to the present time, of the trade and staple products of New South Wales; that trade is again in a healthy state, and from the large quantity of shipping to which it gives employment, in voyages occupying nearly a year, out and home, a skilful and hardy race of seamen are trained, well adapted for service on any emergency necessary for the national defences.

CHAPTER V.

GOVERNMENT OF NEW SOUTH WALES—PROGRESSIVE GRANT OF FREE INSTITUTIONS —EXAMINATION OF PROPOSED NEW CONSTITUTION—AND LAWS IN FORCE IN THE COLONY.

THE government of New South Wales was founded by an order in council, dated 6th December, 1786. By that order, and by the king's warrant, dated 3rd April, 1787, for issuing letters patent, to appoint a vice-admiral, and a judge of the vice-admiralty court for the new settlement, its limits were declared to extend "from the Northern Cape, or extremity of the coast called Cape

York, in the latitude of 10° 37' S., to the South Cape; the southern extremity of the coast, in the latitude of 43° 39' S., and inland to the westward, as far as 135° E. long., including all the islands adjacent in the Pacific Ocean within the latitudes aforesaid." Norfolk Island was included within the limits of the boundary marked out by the order in council. It was not then known that Van Diemen's

Land was an island; and it continued subject to New South Wales until an order in council, dated 14th June, 1825, declared Van Diemen's Land independent of New South Wales, by which Bass' Straits became the southern limit of the colony.

By the commission issued to captain Phillip, the first governor appointed by the crown in 1787, full power was given him to pardon all malefactors sentenced to death by the court of criminal jurisdiction, which consisted of a judge-advocate, (captain Collins), and *six* officers of the sea and land service, acting under a precept issued by the governor. No offender could suffer death unless five members of the court agreed in the award. The governor was fully empowered to make laws for the good government of the colony. The act 27 Geo. III., c. 2, only authorized his Majesty to establish a court of criminal jurisdiction; but, by an order in council, a civil court was formed, consisting of the judge-advocate, and two inhabitants appointed by the governor, who were to hear and determine, in a summary way, all pleas of lands, houses, debts, contracts, and all personal pleas whatsoever.* This civil court could examine witnesses on oath, issue executions under the hand of the judge-advocate, and grant probates of wills and administration of the personal estates of intestates dying within the colony. An appeal lay from this court to the governor, and from him to the Privy Council if the thing in demand exceeded the value of £500.

For several years, the administration of government and of justice was despotic and imperfect. Shortly after the foundation of the settlement, several convicts stated that the period of their sentence to transportation had been completed, but it was found impossible to ascertain if their statements were true, as the important documents concerning the crimes and sentences of the prisoners had never been sent from England. So little were even the formalities of jurisprudence preserved, that the judge, after hearing the evidence against a criminal, used to retire with the military jury to deliberate upon the verdict in an adjoining room. It was only on the suggestion of Mr. Bigge, when commissioner of inquiry, that judge-advocate Wylde charged the members of the court in the presence of the prisoner. The first governors paid little attention to the law court, whose chief, in return, was not very particular in registering the various

orders and proclamations issued, from time to time, by the governors, or very strenuous in requiring them to be obeyed. Governor Bligh not unfrequently took the administration of the criminal law into his own hands, and punished whom he chose.

Governor Macquarie, of whom Mr. Wentworth thus speaks—"never was there a more humane and upright man"—also caused "three freemen, two convicts, and two women" to be seized for trespassing on a particular spot: he ordered, without any hearing, both freemen and convicts to be flogged with twenty-five to thirty lashes each, and the women to be imprisoned for forty-eight hours. These and other proceedings led to an investigation of the state of the colony under the authority of a royal commission, and the exertions of Mr. Wentworth, a lawyer of much popularity at Sydney, and author of an interesting work on N.S. Wales and Van Diemen's Land in 1819, prepared the way for a change in the administration of the government and

On the 13th of October, 1823, his Majesty, under the authority of an act of parliament (4 Geo. IV. c. 96), issued letters patent constituting a supreme court with cognizance of all pleas, civil, criminal, or mixed, and jurisdiction in all cases whatsoever in New South Wales and its dependencies, after the manner of his Majesty's courts of King's Bench, Common Pleas, and Exchequer at Westminster.

In 1823-4, the first step in the progress of free institutions was made (under the provisions of the act 4 Geo. IV., c. 96), by appointing a council to aid the governor; this council was formed of the officer in command of the troops, the archdeacon, the colonial secretary, the treasurer, and attorney-general.

In 1823, an act of Parliament (the 9 Geo. IV., c. 83, s. 20) declared it to be inexpedient to call a Legislative Assembly for the colony, and in lieu of one, provided that it should be lawful for his Majesty under the sign manual to constitute and appoint a council of such persons resident in the colony not exceeding fifteen, nor less than ten, as his Majesty might be pleased to nominate and appoint.

Under the authority of this act of the Imperial Legislature, the governor, with the concurrence of at least two-thirds of the members, might make laws for the colony, if not repugnant to the act 9 Geo. IV. c. 83, or to the charter, or letters patent, or orders

* See Clarke on *Colonial Law*. London: 1834.

in council, or to the laws of England. The governor to have the initiative in the introduction of all laws to be submitted to discussion in the council, provided he gave eight clear days' notice in the public journals, or by public advertisement (should there be no journals), of the general objects of the act proposed to be brought under consideration, unless in case of emergency, when such notice might be dispensed with.

Any member of the council might request the governor to introduce a bill for the consideration of the council. If the governor declined, he was bound to lay his reasons in writing, together with a copy of the bill, before the council, and any member, disapproving of such refusal, might enter upon the minutes the grounds of his disapprobation. If a majority of the members dissented from any bill, and entered the grounds of their dissent on the minutes of council, the bill could not become law. Every bill passed by the council was to be transmitted within seven days to the supreme court, to be enrolled, and after fourteen days from the date of such enrolment, it came into operation. If the judges represented that such bill was repugnant to statutes or other public deeds before cited, it was again brought under the consideration of the council, and if again passed, proceeded into operation, until the pleasure of his Majesty were known, to whom were to be transmitted the opinions of the judges, &c. The votes and proceedings of the Legislative Council were to be officially published in the newspapers. The governor and council had the power of imposing taxes for local purposes. By 3 Geo. IV., c. 96, continued by 9 Geo. IV., c. 83, s. 26, the governor was authorized to impose, on importation into the colony, duties not exceeding 10s. a gallon on British or West India spirits, and 15s. on all other spirits: not exceeding 4s. per lb. on tobacco, nor 15s. per cent. upon goods, wares, &c., not being the growth, produce, or manufacture of the United Kingdom; and, by 9 Geo. IV., c. 83, s. 26, the governor was also empowered to levy a duty upon colonial spirits, not exceeding that levied on imported spirits.

In 1842, (30th July), under the act 5 & 6 Victoria, c. 76, a Legislative Council of thirty-six members was created, of whom one-third was nominated by the crown, and two-thirds elected by the colonists, on whom an elective franchise was conferred, namely, an estate of freehold in possession in lands

or tenements, situate within the district for which such franchise is to be exercised, of the clear value of £200 sterling at the least, above all charges and incumbrances in any way affecting the same, or a householder within such district, occupying a dwelling-house of the clear annual value of £20 sterling money at the least. No person was thus qualified to vote unless he had arrived at the full age of twenty-one years, a natural born or naturalized subject of the queen; and if he had been attainted or convicted of treason, felony, or infamous offence, within her Majesty's dominions, unless he had received a free pardon, or one conditional on not leaving the colony, or had undergone the sentence or punishment to which he had been adjudged for such offence. Voters to be qualified must have been in possession of estate, or occupancy of house, at least six calendar months before the date of writ for election, and have paid up all rates and taxes payable by him as owner, in respect of such estate or house, which shall have become payable during three calendar months next before election or registration. The qualification of elective members of council was fixed at a legal and equitable seisure of an estate of freehold, for his own use and benefit, in lands and tenements in New South Wales, of the yearly value of £100 sterling, or of the value of £2,000 sterling, above all charges and incumbrances affecting the same. Under this act, the legislature then in operation was authorized to make all necessary provisions for dividing the colony into convenient electoral districts; for issuing, executing, and returning the necessary writs for such elections; for determining the validity of disputed returns, and other such matters: but it was provided, that the district of Port Phillip should be formed by a straight line drawn from Cape Howe to the nearest source of the river Murray, and thence along the course of that river to the eastern boundary of the province of South Australia. This district of Port Phillip was to return at least five members; the town of Melbourne, in Port Phillip, one; and Sydney, New South Wales, two members. The Legislative Council, when constituted, had power given them to increase the number of the members of their body, and to alter the districts and electoral divisions, provided the proportion of one-third members of the council, to be nominated by her Majesty, be preserved. Not more than half the number of non-elective mem-

bers of the Legislative Council, appointed by the crown, were to hold any office of emolument under the crown in New South Wales. The non-elective members to hold their seats for five years from the date of appointment, or until the council be dissolved. Non-attendance for two successive sessions, bankruptcy, insolvency, being a public defaulter, conviction of treason or felony, becoming a subject or citizen of any foreign power or powers, or being *non compos mentis* (of unsound mind), would be causes for declaring a seat in the Legislative Council vacant. The governor and Legislative Council were, by this act, authorized to make laws for the peace, welfare, and good government of the colony, provided such enactments were not repugnant to the laws of England, and did not interfere in any manner with the sale or other appropriation of the lands belonging to the crown in the said colony, or with the revenues thence arising. The governor might propose laws to the council; or amend the bills passed by the council, when presented to him for her Majesty's assent; and the council might, in like manner, return any bill in which the governor shall have made any amendments, with a message, signifying those of the amendments to which they agreed, and those to which they disagreed; and thereupon the bill was to be taken and presented for her Majesty's assent, with the amendments so agreed to. The governor might, in her Majesty's name, give an assent to bills passed by the council, or he might withhold it, reserving such bill for the signification of her Majesty's pleasure thereon; and all bills affecting the salaries of the governor, superintendent of Port Phillip, or the judges, or bills altering or affecting the duties of customs upon any goods, wares, or merchandise, or altering the constitution of the Legislative Council, shall, in any case, be so reserved, except temporary bills, which may be assented to by the governor, by reason of some public and pressing emergency. All bills assented to by the governor, to be transmitted to one of her Majesty's secretaries of state; and the queen may, by her Majesty's order in council, within any time during two years after the receipt of the said bill, declare her disallowance of it. The taxes, duties, rates, and imposts levied in the colony, were declared to be appropriated to the public service within the colony, by ordinances to be enacted by the governor, with the advice and consent of the Legislative Council, pro-

vided the governor should have first recommended to the council to make provision for such public service, towards which such money is appropriated, and subject to the fixed annual payment of the sums mentioned in the following schedule:—

Governor	£5,000
Superintendent at Port Phillip	1,500
Chief Justice	2,000
Three Puisne Judges	4,500
Salaries of the Attorney and Solicitor-General, Crown Solicitors, and contingent and miscellaneous expenses of administration of justice throughout the colony	20,000
Colonial Secretary and his department	7,000
Colonial Treasurer and his department	5,000
Auditor-General and his department	3,000
Salary of Clerk, and miscellaneous expenses of Executive Council	600
Pensions	3,000
Public Worship	30,000

These sums might be varied, or altered, and any saving accruing thereby, might be appropriated to such purposes connected with the administration of the government of the colony as to his Majesty might seem fit.

By clause XLI. of this act, provision was made for the local government of different parts of the colony, by empowering the governor to issue letters patent under the great seal of the colony of New South Wales, to incorporate the inhabitants of every county within the colony, or of such parts of counties or other divisions as to him shall seem fit, to form districts for the purposes of this act; to constitute in each district of not less than 7,000 souls, an elective council of not more than nine members; if the district have 7,000 to 10,000 souls not more than twelve councillors, and so on in proportion to the number of souls, the maximum being twenty-one councillors to 20,000 souls. The district councillors to be persons qualified to be elected as members of the Legislative Council; and the district electors to be persons qualified to vote in the election of members of the Legislative Council in the district in which the election is made. If district councillors were not elected by the people, the governor might appoint them. No district councillor to continue in office more than three years, unless re-elected; or to hold any lucrative office under such district council, or to enter into any contract, or have pecuniary dealings with such district council, under certain penalties. The district council to be presided over by a warden, appointed and removable by her Majesty or by the governor; a competent district surveyor to be appointed, and to be removable by

council, subject to approval of governor; the said surveyor to superintend the construction of roads, public works, &c. The district councils to raise, assess, levy, and appropriate money in their respective districts for making roads, streets, bridges, constructing or repairing public buildings, establishing and supporting schools, defraying the expenses of, or connected with, the administration of justice and police within the district; and to direct and control other matters which may be specially subjected to the control of the said district councils, by any law of the governor and Legislative Council of the colony. No fine or penalty to be imposed by the district councils exceeding £10 sterling. No tax to be levied on property belonging to the crown; and copies of all bye-laws to be laid before the governor for his assent, and might be disallowed by him within two calendar months after the receipt of said copies. By clause 47 of this act, 5 & 6 Victoria, it was enacted that one-half of the expense of the police establishment of the colony (exclusive of the convict establishment) should be defrayed out of the general revenue arising from taxes, duties, rates, and imposts levied within the colony, and the other half to be defrayed by assessment upon the several districts of the colony, in such proportion as should be, from time to time, fixed by the governor and Legislative Council. The amount so fixed to be paid by the treasurers of the several district councils according to the warrants of the governor, to whomsoever he may appoint; and if the treasurers had not sufficient money in hand, the district council must levy a fair and equal rate upon all property within the district; and if this be not done, a power of distress and sale might be issued by the governor on the goods of the district treasurer, members of the said district council, or inhabitants of the district.

The foregoing are the leading points in the act 5 & 6 Vict., c. 76. Under it the Legislative Council was established, and now holds its annual sittings; and Sydney and Melbourne were created corporations by charter: they have each a mayor and court of aldermen, who have exercised beneficially the duties entrusted to them, and contributed to the welfare of the inhabitants of each city. Soon after the act 5 & 6 Vict. came into operation, the then governor, Sir G. Gipps, proceeded to issue

charters for the establishment of twenty-nine district councils, choosing for the boundaries the police divisions rather than those of the counties; over each district council a warden was appointed, and district councillors were selected from the most influential and respectable persons resident in each district. The following is a return, issued from the surveyor-general's office, dated July 31, 1844, showing the number of acres contained in each district, for which a district council is provided, and the extent of the land alienated by the crown, in each respectively:—

District.	Alienated.	Unalienated.	Total.
	Acres.	Acres.	Acres.
NEW SOUTH WALES:—			
Macquarie	116,672	2,395,321	2,512,000
Raymond Terrace and Dungog	331,159	1,620,728	1,951,887
Paterson	168,283	104,960	273,243
Maitland	145,318	108,682	254,000
Patrick's Plains	251,784	151,500	403,284
Merton and Muswell- brook	149,818	542,080	691,898
Scone and Murrurundi	237,885	841,600	1,079,485
Cassilis	283,051	1,198,000	1,481,051
Mudgee and Wellington	244,787	2,035,135	2,279,922
Wolombi and McDonald	97,173	958,827	1,056,000
Newcastle	35,868	76,160	112,028
Brisbane Water	57,054	300,800	357,854
Sydney	58,102	82,631	140,733
Paramatta	87,169	63,936	151,105
Windsor	92,059	429,630	521,689
Penrith	129,191	247,898	377,089
Liverpool	64,008	39,900	103,908
Appin and Campbell- town	51,361	82,603	133,964
Camden, Narellan, and Picton	129,386	340,000	469,386
Hartley	80,647	1,279,882	1,360,529
Bathurst and Carcor	715,236	2,719,858	3,435,094
Yass	146,387	965,099	1,111,486
Goulbourn	590,714	955,920	1,546,634
Berrima	90,169	360,676	450,845
Illawarra	137,917	432,640	570,557
Braidwood and Broulee	262,060	1,399,133	1,661,193
Queanbeyan	403,201	806,402	1,209,603
PORT PHILLIP:—			
Bourke	156,640	5,027,360	5,184,000
Grant	59,854	5,412,146	5,472,000

In October, 1843, the Legislative Council passed a resolution, that it was highly inexpedient, even if possible, to cast any portion of the police expenditure on the country districts, and that this expenditure ought to be defrayed, as hitherto, out of the general revenue. The same course was adopted the ensuing year; and the governor found himself unable to carry out the intentions of the act 5 & 6 Vict., by the unwillingness of the colonists to become members of the district councils. Mr. Deas Thompson, the

experienced secretary to the government of New South Wales, in a useful analysis of the proceedings relative to the district councils, dated 27th March, 1847, says—

"It may not be altogether irrelevant now to inquire how far the establishment of municipal institutions in the country districts has been favourably received by the inhabitants. If we may judge by the result of the elections in the different districts, the possession of this privilege is looked upon, at least in a great many of them, with much indifference—an indifference which appears to have annually increased since their first establishment. The following summary, showing the number of members elected, and nominated by the governor in default of election, to fill the annual vacancies of one-third, under the charter, will sufficiently illustrate the truth of this conclusion: viz.—

1844 . . . elected, 67: nominated, 0 = 67.
1845 . . . elected, 51: nominated, 14 = 65.
1846 . . . elected, 38: nominated, 32 = 70.

"Thus, during the three years in question, there were 156 persons elected, and forty-six nominated by the governor. It is also undoubted, that of those elected, a considerable proportion did not consist of the persons most eligible for so important a trust, a great disinclination being understood to prevail amongst many highly respectable persons to accept the office. It appears that (with the solitary exception of the sum of £170, raised by the district council of Grant) in none of the districts was any revenue whatever raised by assessment. In several, debts have been incurred in payment of the salaries of the officers appointed by the council; but the refusal of the Legislative Council to grant the additional facilities necessary to enable these bodies to levy the assessments when made, and the strong opinions expressed in debate of the risk which would attend their enforcement, seem to have entirely paralyzed the endeavours of the several district councils to exercise their legitimate powers."

Paramatta was almost the only exception to the total inactivity which characterized the district councils. The Legislative Council would lend no assistance to the executive government in giving effect to this part of the constitution of the colony; and, reasoning from a connected series of facts on the subject, Mr. Thompson thus recapitulates the conclusions at which he arrived:—

"1st. That district councils have, from the causes mentioned, entirely failed to answer the object contemplated in their establishment.

"2nd. That there is at present only one in active operation, and this one is sustained only by contributions from the government, and not by assessment raised under the powers granted to it under the act.

"3rd. That these institutions, in their present form, are not adapted to the state of society in this colony.

"4th. That so far as the Legislative Council or the public at large is concerned, they are not regarded in any favourable light.

"Such are the general conclusions at which I am forced to arrive, from a full consideration of all the circumstances I have detailed. I am by no means prepared to say, however, that, with considerable

modification, they may not be adapted to the peculiar circumstances of the colony; but this can only be done by leaving all legislation on the subject to the local legislature. No doubt, as has been experienced in other colonies, there may be an indisposition on the part of the Supreme Legislature to grant to any other bodies concurrent powers of taxation; but for mere local purposes it is scarcely to be apprehended that this would be refused, especially when it would have the effect of relieving the general treasury from heavy burdens, which it can ill afford to bear."

In the Port Phillip division of the colony district councils were established in the counties or districts of Bourke and Grant. Mr. Latrobe, the superintendent of Port Phillip, stated, in September, 1846, that they had then been in existence four years; but it was not in his power "to point out a single instance or particular, in either case, in which the object of these establishments had been attained. There has not (he says) been one road made or repaired under their charter; not one school established; not one public building erected; and not one farthing raised or applied to the support of a district police, or to the administration of justice."

This summary of the principal facts connected with the district councils, will enable the reader to understand better the necessity of a new constitution for New South Wales, and the basis on which it was subsequently proposed to found it. Previous to proceeding chronologically with the legislative history of the colony, it should be remarked, that the Legislative Council of two-thirds elective, and one-third nominated members, as provided by the act 5 & 6 Vict., had worked well, and passed several useful colonial laws. The distribution of the elective franchise was (according to Mr. Braim), in 1844, when the population was 130,856, as follows:—

District.	Number of Electors.	Number of Members returned.
Sydney	2,823	2
Cumberland, County .	1,344	2
Camden	386	1
Northumberland . . .	369	1
Durham	345	1
Melbourne	591	1
	5,858	8
Eleven other Districts	2,619	16
Total	8,477	24

A committee of the Legislative Council in New South Wales recommended that leaseholders of and at a rental of £20 per an-

num, or squatters possessed of 200 cattle or 1,000 sheep, should have a vote. During the last four years, the attention of her Majesty's government has been specially directed to a consideration of the governmental state of the Australian colonies, and to the granting of representative assemblies to these settlements.

On the 31st July, 1847, Earl Grey, her Majesty's secretary of state for the colonies, addressed an able despatch to Sir Charles Fitzroy, governor of New South Wales, in which his lordship stated, that her Majesty's government adopting, in general, the reasonings of Sir G. Gipps (the late governor of New South Wales), and of the majority of the executive council, had submitted to the queen their opinion, that Parliament should be recommended to impart to her Majesty the authority necessary for carrying into effect the separation of the Port Phillip district from the rest of the colony of New South Wales. Earl Grey, in expressing his own conclusion for the separation of Port Phillip from New South Wales, remarks, that it rested mainly on the principle, that all affairs of merely local concern should be left to the regulation of the local authorities; and proceeds to state, that if local self-government is necessary for the good of the whole colony, it is not less necessary for the good of the several districts of which it is composed; and his lordship adds—

"For this reason it was that Parliament provided for the erection, throughout New South Wales, of municipal corporations, which should, in various respects, balance and keep in check the powers of the Legislative Council. By this method it was supposed that the more remote districts would be able to exercise their fair share of power, and to enjoy their proper influence in the general polity of the whole province. But the result has disappointed this expectation. The municipalities have only a nominal existence. The Legislative Council has absorbed all the other powers of the colonial state. The principle of self-government in the districts the most remote from Sydney is therefore acted upon almost as imperfectly as if the conduct of local affairs had remained under the same management and institutions as those which the existing system superseded."

The secretary of state then announces the intention of her Majesty's government to propose to Parliament some changes in the existing constitution of New South Wales, consequent on the separation of the Port Phillip district. In indicating the general principles on which it was proposed to legislate, Earl Grey stated, that in revising the constitution of New South Wales, her Majesty's government was still favourable

to the creation of local authorities, such as the district councils, especially with a view to their "being made to bear to the House of Assembly the relation of constituents and representatives." The despatch however, on this point, is vague and inconclusive. Earl Grey, indeed, expressed his desire to be relieved of the responsibility of proposing such a change, by obtaining "the most complete local intelligence, supported by the most eminent local authorities." In one paragraph in this despatch, his lordship expresses a decided feeling in favour of the establishment of two distinct houses of legislation:—

"You are aware that, in the older British colonies, the legislature, as in New South Wales, is generally composed partly of nominees of the crown, and partly of the representatives of the people; but there is this important difference between the two systems—that in the one case the legislature is divided into two separate houses and chambers; in the other, the representatives of the people and the nominees of the crown form a single body, under the title of the Legislative Council. It does not appear to me that the practical working of this last system would by any means justify the conclusion, that it is an improvement upon that which it was formerly the practice to adopt; on the contrary, *I see many reasons for belief, that the more ancient system, by which every new law was submitted to the separate consideration of two distinct houses, and required their joint consent for its enactment, was the best calculated to insure judicious and prudent legislation.*"

Finally, the secretary of state concludes with the following sentiment, worthy of his lordship's high station:—"I need scarcely add, that it will be a source of the highest gratification to me, if, under the authority of Parliament, the colonial governments of Australia can be settled on a basis on which the colonists may, under the blessing of Divine Providence, themselves erect institutions worthy of the empire to which they belong, and of the people from whom they are descended."

On the receipt of this despatch, of July 31, 1847, in New South Wales, the governor, Sir Charles Fitzroy, caused it to be printed for general circulation; a storm of opposition was immediately created against the proposition of perpetuating the district councils, and of delegating to them the right of electing representatives to legislate for the colony.

The colonists considered that it would be utterly impossible ever to bring those councils into effective operation; that the power and authority with which they were invested would centre in the governor; that they would be virtually deprived of the existing

elective franchise; that there were to be two legislative houses—one appointed by the crown, and dependent, only on the government—the other subservient only to the district councils, by whom its members would be elected—so that neither house would be independent; and that the making their colony the subject of a theoretical experiment in legislation was a measure of which they could never admit the policy or justice. But there was nothing in the despatch of Earl Grey, expressed or implied, to justify the violent language used at some of the public meetings in the colony; and from no previous colonial minister had the colonists met with a larger concession to liberal principles; the fault—if I may use the term—lay in the indefinite wording of the despatch, and the absence of any determined line of policy on the part of her Majesty's government.

Among the documents emanating from the colonists, on this occasion, was a petition from the magistrates, landholders, and residents in the district of Picton, county Camden (New South Wales), to the governor, Sir Charles Fitzroy, and forwarded by his excellency to Earl Grey, March 27, 1848 (received August 7, 1848), which sets forth the objections to the then proposed alteration in the constitution of New South Wales:—

"Your petitioners have learned, with much regret and dissatisfaction, that it is the intention of her Majesty's government to alter the present constitution of the colony, and substitute in its stead a form of representation totally at variance with all their ideas of liberty, and utterly repugnant to every British colonist.

"Your petitioners would respectfully point to their own district, in order to show that it will be impossible to carry out such a scheme as is detailed in the despatch of Earl Grey to your excellency. The district contains an area of nearly 600 square miles, and the population only numbers 1,200, according to the last census; while there is but one village in the whole district, containing about 120 persons, and distant only fifty miles from Sydney. By the last electoral list there appears to be sixty-eight voters, but the number would be considerably increased if the franchise was extended to leaseholders.

"Your petitioners would also beg to remark, that not only would it be impossible to establish district councils in any shape, but at present there is even a difficulty in finding properly-qualified persons to act as local magistrates; and your petitioners believe that there are other districts similarly situated in the colony.

"Your petitioners would particularly call the attention of your excellency to that part of the despatch where it is admitted that 'the intention of Parliament to create local authorities (district councils) has hitherto been defeated;' but the fact of such a dan-

gerous and iniquitous power being given to any government officer, as detailed in clause 49 of the present Constitutional Act, (5 & 6 Vict., c. 76), is quite sufficient of itself to account for that part of the act not having been carried out.* And your petitioners are convinced, that all future attempts of this nature will, in like manner, be defeated."

The inhabitants of Windsor (New South Wales), in a petition to the Queen, in 1848, in common with all the other addresses to the sovereign, express the following sentiments:—

"We, the undersigned inhabitants of the district of Windsor, in the colony of New South Wales, beg, in approaching your Majesty, to express our ardent and devoted loyalty to your Majesty's person and government, and our fervent desire that it may be permitted to you, by Divine Providence, long to sway the British sceptre with much prosperity and glory."

After deprecating the changes proposed in the constitution of New South Wales, as intimated in the despatch of her Majesty's secretary of state, under date July 31, 1847, and addressed to the governor of the colony, the petitioners thus proceed:—

"As natural born subjects of your Majesty, we consider ourselves entitled to equal rights and privileges with our fellow-subjects in the United Kingdom; and we earnestly deprecate the changes alluded to, as laying the axe to the very root of those rights and privileges, by depriving us of the most valuable of them—the being present, by immediate representation, in the Assembly where are enacted the laws by which we are governed. We are most desirous to enjoy a constitution as nearly as may be alike to that of the United Kingdom; and we accordingly think it due to the colonists, that no measure of magnitude should be passed at home, affecting the colony, without their previous assent."

After a protracted debate on the subject in the Legislative Council of New South Wales, in April, 1848, the Council recorded no opinion; but their views were adverse to the proposed changes. One of the motions, and the mode in which it was disposed, as also a classification of the voters, explains in some degree the state of parties in the colonial Legislative Council.

Question proposed.—That this committee do agree to the following resolution:—"That this Council is disposed to view favourably the proposition of separating the deliberations of the nominees of the crown from those of the representatives of the people."—(Mr. Cowper.)

Question put.—That the word "not" be inserted before disposed, and the words "but that the cession of the territorial revenue, or of the Schedules A, B, and C, to the appropriation of this Council, would be

* The clause refers to the power of distress and sale given to the governor over the goods of the district treasurer, district councillors, or district electors, in the event of the district not paying the amount leviable by the governor for the police-rate in the district.

an amendment in the present constitution," after the word people.—(Mr. Wentworth.) Committee divided:

<i>Ayes</i> , 10.	<i>Noes</i> , 11.
• Mr. Murray.	† Major-gen. Commanding
• Mr. Wentworth.	† Colonial Secretary.
• Captain O'Connell.	† Mr. Allen.
• Mr. Bowman.	• Mr. Foster.
• Mr. Lord.	† Attorney-general.
• Dr. Bland.	• Mr. Lowe.
† The Collector of Customs	† Mr. Berry.
• Mr. Danger.	• Mr. Macarthur.
• Captain Dumaresq.	† Mr. Darvall.
Mr. Robinson (Teller.)	• Mr. Cowper.
	† Col. Treasurer (Teller)
Elected, 9; official, 1; total, 10.	Elected, 4; official, 4; nominees, 3; total, 11.

<i>Ayes</i> , 11.	<i>Noes</i> , 10.
† Attorney-general.	• Captain O'Connell.
† Colonial Secretary.	• Mr. Bowman.
† Colonial Treasurer.	• Mr. Wentworth.
• Mr. Lowe.	• Mr. Dangar.
† Mr. Berry.	• Mr. Lord.
• Mr. Macarthur.	• Dr. Bland.
† Mr. Darvall.	• Mr. Murray.
† Mr. Allen.	• Captain Dumaresq.
• Mr. Foster.	† Collector of Customs.
† Major-gen. Commanding	• Mr. Robinson (Teller.)
• Mr. Cowper (Teller.)	
Elected, 4; official, 4; nominees, 3; total, 11.	Elected 9; official, 1; total, 10.
<i>Note.</i> —Those marked thus • are elected; thus †, official; and thus ‡, nominees.	

The governor, in a despatch to her Majesty's secretary of state (dated 11th August, 1848, received, 19th January, 1849), conveying the details of the debate in the Legislative Council, thus expresses his own opinion in favour of two legislative chambers:—

"Your lordship will not fail also to observe that the main point of difference which led to the result was the question of the establishment of a Legislative Council distinct from a Representative Assembly, and a perusal of the debates which took place on this question will make your lordship acquainted with the fact, that the opposition that was raised to the constitution of these two legislative bodies was not grounded upon any principle of government, but simply and avowedly upon the assertion that a Legislative Council interposed between the executive government and the Representative Assembly would render the former more independent of the latter, and therefore not so liable to be controlled by the fear of coming into direct collision with it.

Having thus endeavoured to put your lordship in possession of the proceedings of the Council as briefly as was consistent with a clear explanation of them, it only remains for me to add my own opinion, which is, I believe, confirmed by that of the most experienced and unprejudiced persons who have watched the working of the present constitution of this colony, that the assimilation of the constitution of this colony to that of the older British colonies, where distinct legislative bodies exist, would be generally considered to be extremely advantageous to its interests, but that the introduction of the double scheme of election, by mak-

ing the district councils the constituents of the House of Assembly, would be most unpalatable to the whole community, and would excite throughout the colony a resistance which would in all probability render it inoperative, while it would not fail to create an ill-feeling towards her Majesty's government, which would not easily be allayed."

The language used by Sir William Denison, the governor of Van Diemen's Island, in a letter to her Majesty's secretary of state, dated 15th August, 1848, and received in London, 10th March, 1849, is very conclusive on the point expressed by the governor of New South Wales, and deserves record; but his expression as to the character of the people, in making wealth their sole consideration, is far too general and unqualified a censure on the colonists of New South Wales; yet, were it not so, they would have some excuse, in the absence of honorary distinctions—of prizes for emulation—and other gratifications, apart from or contrary to those of self-indulgence.

Sir William Denison, although writing under the idea that an act providing for a Representative Assembly in Van Diemen's Island, might already have been passed by the Imperial Parliament, nevertheless deemed it his duty not to withhold any information which might enable the secretary of state "to form a judgment as to the nature of the institution best adapted to secure the permanent welfare of these colonies."

His excellency thus proceeds:—

"Without, therefore, wishing or presuming to give an opinion on the general question of the best form of legislative body, I may say that, under the peculiar circumstances of these colonies, I should most strenuously recommend the adoption of a second or upper chamber.

"When we consider the elements of which society here is composed,—when we see the low estimate that is placed upon everything which can distinguish a man from his fellows, with the sole exception of wealth—when we see that even wealth does not lead to distinction, or open the road to any other ambition than that of excelling in habits of self-indulgence—it can hardly be subject of surprise that so few are found who rise above the general level, or that those few owe more to the possession of a certain oratorical facility than to their powers of mind or the justness of the opinions which they advocate.

"The broad plain of equality, as in America, receives the whole of the community; and though there are many who would gladly avail themselves of any opportunity of raising themselves above the general level, yet here, as in America, any attempt to do so would be frustrated by the jealousy of the remainder of the community.

"Your lordship can hardly form an idea of the character of the population of these colonies.

"It is usual to assume that colonies are off-shoots from the parent stock, containing in themselves the germs of all the elements of which society in the mother country is composed.

"This can only be said of any colony with many reservations, but it cannot be said of these colonies with any appearance of justice or truth.

"There is an essentially democratic spirit which actuates the large mass of the community; and it is with the view to check the development of this spirit, of preventing its coming into operation, that I would suggest the formation of an upper chamber."

"The members of this, call it senate or what you may, will be raised in some measure above the general level of society—they will be rendered independent of popular blame or approbation—but, being also free from the suspicion of acting under the control of the government, they will conciliate popular feeling between the executive and the legislature.

"I do not presume to enter into any detail of the mode in which such an assembly should be constituted, further than to express an opinion that the government should have as little as possible to do in the nomination or selection of the members.

"There must, of course, be some ex-officio representatives of the government in the house. The bishops of the church of England and Rome might sit as representatives of the ecclesiastical bodies; but as the object with which I advocate the establishment of a second chamber, is more that of operating morally upon the body of the community, than of facilitating generally the operations of the executive government, I should be loth to recommend the adoption of a plan which might in any way neutralize the beneficial action of such a body upon the mass of the people.

"I also think that, in order to render the members perfectly independent of either the government or the people, they should be appointed or elected for life.

"Trusting that your lordship will not be of opinion that, in offering these suggestions, I have in any way exceeded the limits imposed upon me by my position in this colony."

On the 31st of July, 1848, her Majesty's secretary of state, in a despatch to Sir Charles Fitzroy, the governor of New South Wales (which was written before the receipt of the preceding letters from the governors of New South Wales and Van Diemen's Land, or of the petitions or the resolutions of the Legislative Council of New South Wales), says:—

"I collect from the documents now before me, that the objections most strongly felt throughout the colony to the views propounded in my despatch, relate to the project of making the district councils serve as constituent bodies to the legislature; and, though in a less degree, to the division of the legislature into an assembly and a council, according to the ordinary pattern of the governments of those colonies which derive their free institutions from Great Britain."

It does not appear to me, from the documents laid before Parliament, that the colonists did object generally to two houses of legislature, according to the old established form of colonial government (except in one instance of comparatively trifling moment); their objection lay to two houses—one nominated by the crown or governor, and

the other by district councils—because the latter would also be under the influence of the governor.

I cannot but imagine that Earl Grey, in his sincere wish "not to impose upon the inhabitants of the colony a form of government not, in their judgment, suited to their wants," did not think it necessary to advise the carrying of his proposal into execution; and considered that the interests of the colonists would be better served, by leaving in their own hands the power of establishing two houses of legislature, whenever they shall have reason to do so. His lordship stated, in his despatch of 31st July, 1847, that he concurred in opinion with the governor of New South Wales, that the division of the legislature into council and assembly, founded, as it is, on long practical experience, would be a decided improvement upon the present form of the legislature in New South Wales; and, if the general feeling of the colony had responded to it, his lordship would have had no hesitation in advising her Majesty's government to lay before Parliament the measures necessary to accomplish the change. It being too late in the session of 1848, to introduce a bill for the separation of Port Phillip from New South Wales, and for the granting of Legislative Councils to the other Australian colonies, and for the general regulation of the affairs of the whole of the colonies, the secretary of state appears to have laid the subject before a committee of the lords' committee of the Privy Council, appointed for the consideration of all matters relating to trade and plantations, such committee consisting of several cabinet ministers and privy councillors, accustomed to the discussion of colonial matters.

On the 1st May, 1849, a court was held at Buckingham Palace before the queen, when a report of the lords' committee of the Privy Council for trade and plantations, was read, relative to a bill to be introduced into the Imperial Parliament for the "better government of the Australian colonies."

The following is an abstract of the leading points in the report:—In the ancient possessions of the British crown, which at present form so large a part of the United States of America, and in all the other British colonies, whether acquired by the occupation of vacant territories or by cessions from foreign powers, there prevailed until the commencement of the nineteenth century the almost invariable usage of establishing a

local legislature, consisting of three estates—that is, of a governor appointed by the sovereign, of a council nominated by the sovereign, and of an assembly checked by the people. During the nineteenth century, the crown acquired sixteen colonies, in no one of which has the whole colonial polity of a governor, council, and assembly been introduced; it has however been the practice of parliament to recognize the ancient principle, and to record the purpose of resuming the former constitutional practice so soon as the causes should have ceased to operate, which in each particular case had forbidden the immediate observance of it. The pledge has been redeemed in New South Wales, except so far as relates to the combination which has taken place there, of the council and assembly into one legislative house or chamber; and it has been also redeemed with regard to New Zealand, although peculiar circumstances have required a temporary postponement of the operation in that colony of the act passed by Parliament for establishing in it a representative legislature.

With regard to South Australia, and to Van Diemen's Island, (and also to Western Australia when the settlers shall be able and willing to sustain from their local revenues the expense of their own civil government, which is now provided annually by a grant of the Imperial Parliament,) the committee are of opinion that the time has arrived when parliament may properly be recommended to institute in each of these colonies "a legislature in which the representatives of the people at large should enjoy and exercise their constitutional authority;" and that on the separation of Port Phillip (which the committee suggest should be named *Victoria*, after her Majesty) a legislature should also be created in which the representatives of the people should exercise their constitutional authority and influence.

As to the nature of the legislatures to be established in the several Australian colonies, the committee say—

"If we were approaching the present question under circumstances which left to us the unfettered exercise of our own judgment, we should advise that Parliament should be moved to recur to the ancient

* It is a grave question, and demands serious consideration, whether the crown ought to give up its rights to the disposal of the waste lands in the colonies. These lands, I think, ought to be viewed as the patrimony of the people of England, and to be rendered available for the maintenance of her labouring poor, who, unable to obtain remunerative employment at home, are desirous of seeking, in another

constitutional usage, by establishing in each a governor, a council, and an assembly. For we think it desirable that the political institutions of the British colonies should thus be brought into the nearest possible analogy to the constitution of the United Kingdom. We also think it wise to adhere as closely as possible to our ancient maxims of government on this subject, and to the precedents in which those maxims have been embodied. The experience of centuries has ascertained the value and the practical efficiency of that system of colonial polity to which those maxims and precedents afford their sanction. In the absence of some very clear and urgent reason for breaking up the ancient uniformity of design in the government of the colonial dependencies of the crown, it would seem unwise to depart from that uniformity. And further, the whole body of constitutional law which determines the rights and the duties of the different branches of the ancient colonial governments having, with the lapse of time, been gradually ascertained and firmly established, we must regret any innovation which tends to deprive the Australian colonies of the great advantage of possessing such a code so well defined and so maturely considered.

"But great as is the weight that we attach to these considerations, the circumstances under which we actually approach the question are such as to constrain us, however reluctantly, to adopt the opinion that the proposed Act of Parliament should provide for the establishment in each of the four Australian colonies of a single house of legislature only; one-third of the members of which should be nominated by your Majesty, and the remaining two-thirds elected by the colonists."

The grounds on which the committee arrived at this conclusion were, that a single chamber already legislated for New South Wales and Port Phillip; that it did not appear advisable to alter it, and that the other Australian colonies ought not to have a different legislative system.

They however recommended that the several provincial legislatures should have the power of "amending their own constitutions by resolving either of these single houses into two houses of legislature, subject to the approval of the crown; that the governor-general of Australia should have power to convene a General Assembly of not less than twenty nor more than thirty delegates, to be elected by two or more of the provincial legislatures, and that this General Assembly should have full power over the disposing and proceeds of the crown lands in Australia; the imposition of custom duties, and other general subjects."* The whole colonial revenues to be surrendered to the colonists,

and less densely-peopled portion of the empire, the subsistence and the means of elevation which is denied them by the over-crowded state of population in the United Kingdom. It is one thing to lay so high an upset price on land, as in New South Wales, as to stop its sale either in the colony or in England; it is quite another thing to give up all control, on the part of the crown, over those lands which have

except a civil list to be settled upon the crown, of an amount sufficient to defray the expenses of those services which it would be inexpedient to have to be provided for by annual votes of the respective legislatures; and a revision of the annual appropriation of the sum of £30,000 now voted from the revenues of New South Wales and Port

Phillip, for the support of public worship among the different churches of England, Scotland and Rome, and the Wesleyan Society; the distribution of which is deemed to be too strongly in favour of the Church of England, to be made on the basis of the following calculations; and the sum to be increased to £33,560 per annum:—

Voted by Legislative Council, for Religious Purposes.	In the present undivided colony of New South Wales.				
	Church of England.	Church of Rome.	Church of Scotland.	Wesleyans.	Total.
	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£
Distribution of £30,000 according to Census of 1841 (existing arrangement)	17,581 2 4	8,510 14 6	3,136 9 11	771 13 3	29,998
Distribution of £30,000 according to Census of 1846	15,715 0 0	9,333 0 0	3,634 0 0	1,316 0 0	29,998
Sums which, according to the Census of 1846, will correspond with the sum now enjoyed by the Church of England, according to the Census of 1841.	17,581 0 0	10,441 0 0	4,066 0 0	1,472 0 0	33,560

According to the census of 1846, the distribution would be—New South Wales—Church of England, £14,812; Victoria—£2,769: ditto, ditto—Church of Rome, £8,757 and £1,684: ditto, ditto—Church

of Scotland, £2,979 and £1,087: ditto, ditto—Wesleyans, £1,176 and £296.

The following is the census of the various religious denominations in 1841 and 1846, upon which the above calculations are founded:—

Years.	Church of England.		Church of Rome.		Church of Scotland.		Wesleyans.	
	Sydney District.	P. Phillip District.	Sydney District.	P. Phillip District.	Sydney District.	P. Phillip District.	Sydney District.	P. Phillip District.
Population, 1841	67,537	6,190	33,249	2,441	11,009	2,144	2,586	650
Population, 1846	79,810	14,923	47,187	9,075	16,053	5,856	6,338	1,597

The report having been approved by the queen in Council, the secretary of state proceeded to act on it, and on the 11th of February, 1850, a bill for the better government of her Majesty's Australian colonies, proposed by her Majesty's ministers, was brought into parliament; and the 19th of February following, this bill was read a second time. The following is an abstract of its leading provisions:—

1. The district of Port Phillip to be separated from the Sydney or Middle district, commonly called New South Wales; and, after separation, to be named Victoria, and to constitute a separate colony; and its boundaries on the north and north-east to be a straight line drawn from Cape Howe to the nearest source of the river Murray,

been acquired, in past years, by the valour, skill, and patriotic spirit of Englishmen. If the crown, its ministers, and the legislature of the United Kingdom declare they are unable to frame a system of representative colonial government, and to deal effectively

and thence, by the course of that river, to the eastern boundary of the colony of South Australia.

2. That New South Wales and Port Phillip shall each possess a Legislative Council; the number of members in the said councils to be liable to variation, and to be determined by the respective governors in council; and one-third of the whole number of each council to be appointed by the crown or its representative, the governor of the colony, and the remaining two-thirds to be elected by the inhabitants of the colonies, according to the electoral districts and franchises which may be established by the governors in council.

3. Legislative councils to be established in South Australia and in Van Diemen's

with the proceeds of the sale of crown lands for the promotion of emigration, then there is no alternative but to permit the colonists to construct their own constitution, and to hand over to them the vast and valuable domains of the crown in their respective territories.

Island, not exceeding in number twenty-four each, of whom one-third shall be appointed by the crown. The electoral districts, the franchise, the representative qualification, and the laws for the regulation of the said councils, to be determined by the colonial councils or legislatures, when created.

4. A similar legislative council may be established in Western Australia, as soon as its colonists defray such part of the expenses of the civil establishments as is now defrayed by parliamentary grant.

5. The governors and Legislative Councils of New South Wales, Port Phillip, South Australia, Van Diemen's Island, and Western Australia have hereby authority to make laws for the peace, welfare, and good government of the said colonies respectively; and, subject to the provisions of the following civil lists, may appropriate to the public service the whole of her Majesty's revenue within such colonies, arising from taxes, duties, rates, and imposts levied on her Majesty's subjects in said colonies: provided that such law be not repugnant to the law of England, or interfere in any manner with the sale or other appropriation of the lands belonging to the crown within any of the said colonies, or with the revenues thence arising. The governor must first authorise the specific appropriation of any sum of money, before it can be passed by the Legislative Council; and the money cannot be lawfully issuable except in pursuance of warrants under the hand of the governor of the said colony, directed to the public treasurer thereof.

The schedules, or civil lists, referred to in the foregoing are—

NEW SOUTH WALES.

Governor	£5,000
Chief Justice	2,000
Two Puisne Judges	3,000
Salaries of the Attorney and Solicitor-General, Crown Solicitor, and contingent and miscellaneous expenses of the administration of justice throughout the colony	19,000
Colonial Secretary, and his department	6,500
Colonial Treasurer, and his department	4,000
Auditor-General, and his department	3,000
Salary of Clerk, and miscellaneous expenses of Executive Council	500
Pensions	2,500
Public Worship	28,000

VICTORIA.

Governor	2,000
Judge	1,500
Salaries of the Attorney-General and Crown Solicitor, and contingent and miscellaneous expenses of the administration of justice throughout the colony	5,000

Colonial Secretary, and his department	£2,000
Colonial Treasurer, and his department	1,500
Auditor-General, and his department	1,100
Salary of Clerk of Executive Council, and miscellaneous expenses	400
Pensions	500
Public Worship	6,000

VAN DIEMEN'S LAND.

Governor	2,000
Chief Justice	1,500
Puisne Judge	1,200
Salaries of Attorney and Solicitor-General, Crown Solicitor, and contingent and miscellaneous expenses of the administration of justice throughout the colony	13,300
Colonial Secretary, and his department	2,800
Colonial Treasurer, and his department	1,800
Auditor-General, and his department	1,600
Salary of Clerk of Executive Council, and miscellaneous expenses	700
Pensions	2,000
Public Worship	15,000

SOUTH AUSTRALIA.

Governor	2,000
Judge	1,000
Salaries of the Advocate-General and Crown Solicitor, and contingent and miscellaneous expenses of the administration of justice throughout the colony	5,000
Colonial Secretary, and his department	2,000
Colonial Treasurer, and his department	1,500
Auditor-General, and his department	1,000
Salary of Clerk of Executive Council, and miscellaneous expenses	500
Pensions	—

The schedule, or civil list, for Western Australia to be not less in amount than the sum which may have been last authorized by Parliament to defray the charge of the civil establishment, in the year previous to the assembling of a Legislative Council.

6. The governors and Legislative Councils of the several colonies may alter all or any of the sums mentioned in the foregoing schedules, and the appropriation of such sums to the services and purposes therein stated; but such alteration cannot take effect without the signification of her Majesty's pleasure thereon, and any saving which may accrue from such alteration shall be applied to such purposes connected with the administration of the colony, as to her Majesty shall seem fit.

7. The district councils and the district police rate to be established by Act 5 & 6 Vict., c. 76, s. 41, in New South Wales, are avoided, and any letters patent issued under that Act, are revoked; but the governor may, upon petition made to him, grant charters under the great seal of the colony, and the same may take place in the other colonies in Australia.

8. The authority of the crown to disallow certain laws and ordinances is preserved.

9. The governor and Legislative Councils may impose and levy import custom duties, subject to the provisions of this act, and provided that no new duty be imposed upon the importation of any article at a higher rate than that levied upon the produce or manufacture of another country; *i.e.*, the colonies must have no discriminating duties.

10. The colonial legislatures to have full power to make further provisions for the administration of justice; to define the constitution of their courts of law and equity; and to regulate the jury law; a supreme court to be created in the new province of Victoria.

10. The existing boundaries of New South Wales and of Victoria may be altered by an order of the Queen in council; six months' notice to be given to either colony which shall not have petitioned for such alteration; and her Majesty may, on the petition of the inhabitants of the territories lying north of the thirtieth degree of latitude, erect the said territories into a separate colony.

11. The Legislative Councils of two or more of the above-named colonies may, by addresses to the governor-general of Australia, require the convocation of a general assembly, to consist of the governor-general and a house of delegates, to be elected by each Legislative Council, in the proportion of two for each colony, and one additional member for every 15,000 inhabitants in each colony; and this general assembly may make and vary its own constitution, subject to the confirmation of her Majesty in council. This general assembly to sit for three years, and then to be dissolved or prorogued by the governor-general.

According to the most recent censuses, the general assembly would be thus formed:

Colony.	Population.	Delegates.
New South Wales	155,000	12
Victoria	33,000	4
South Australia	31,000	4
Van Diemen's Island . . .	46,000	5
West Australia (about). .	—	3
Total	—	28

12. The general assembly of delegates may alter the acts 6 Vict., c. 36, and 9 and 10 Vict., c. 104, for regulating the sale of waste lands belonging to the crown in the Australian colonies, and may make laws for selling, demising, granting licences for occupation of, or otherwise disposing of the waste lands of the crown in the colonies represented in such

general assembly; and may impose, levy, and alter, or repeal duties of customs on the importation of goods into or from all the colonies represented in the general assembly, subjecting to appropriation to the public service of such colonies respectively by the separate legislatures thereof, such portions of the aggregate revenue as to such general assemblies may seem meet. The general assembly of delegates may also create and define the powers of a general supreme court of original jurisdiction or of appeal from the several courts of the respective colonies; post-office regulations; weights and measures; roads, canals, or railways traversing two or more of such colonies; the erection and maintenance of lighthouses and beacons; the imposition of shipping dues at any port or harbour within the said colonies; for the enactment of laws affecting the colonies represented on subjects which the respective Legislative Councils shall desire legislation; for the appropriation of such sums as may be necessary to the purposes designed by such legislation, and for the raising of such sums by an equal per centage on the revenues of all such colonies. But no duties to be levied upon articles imported for the supply of her Majesty's land or sea forces; and no duties, charges, prohibitions, exemptions, or privileges to be enacted contrary to or at variance with any treaty concluded by her Majesty with any foreign power.

13. The power of general assembly, if disputed, to be determined by her Majesty in council.

14. The governors and Legislative Councils, with the assent of her Majesty in council, may alter the Constitution of the Legislative Councils of their respective colonies; instead of a Legislative Council, as before provided, with one-third nominees of the crown, and two-thirds elected, they may establish a council, and a house of representatives, or other separate legislative houses, and vest in them the powers and functions of the Legislative Councils for which they may be substituted. But any bill passed for such purpose must be reserved for the signification of her Majesty's pleasure thereon, and be laid before both houses of parliament for at least thirty days before her Majesty's pleasure be signified.

15. The crown may nominate any of the governors of the Australian colonies governor-general of Australia.

There can scarcely be a doubt, that both the report of the committee of the Privy

Council, and the bill founded thereon, and introduced into parliament on the 11th February, 1850, have been dictated by the most liberal principles, and that her Majesty's government, in framing them, have sincerely desired to secure to the Australian subjects of the crown the fullest amount of political liberty. But granting the highest meed of praise to the ministers who propose to secure to Englishmen, in every British dominion, the inestimable blessing of free institutions; and to extend impartially to those who occupy even the most distant outposts of the empire, the privileges which their ancestors have gradually obtained, after centuries of sacrifice and struggle—it may be still fairly debated, whether the proposed new constitution for the Australian colonists, or the proposed plan of enabling them to make or amend their own form of government, is the course most likely to conduce to their ultimate well-being; and further, whether such course be compatible with their position as subjects of the British crown. The question happily invites discussion, and that of a nature most likely to elicit truth, and prompt to judicious and efficient measures, instead of forming the grounds of a mere party or parliamentary contest. There can be no difference of opinion as to the necessity of granting, as soon as may be, local self-government to the Anglo-Saxon race in Australia, to the furthest extent compatible with their relation to the sovereign of this realm. For the well-being of the Australians themselves, it is evidently very important, that whatever form of government be now granted, it should, at least for some years to come, be definitely settled by the Imperial Legislature, and not left to be a standing bone of contention among conflicting interests, by which the industrial proceedings of the colonists would be disturbed,—their feelings, if not indeed engaged in violent internecine democratic strife, at least kept in a state of feverish excitement, their attention being perpetually directed to the framing of constitutions which may not be agreed on for years to come, instead of their whole energies being engaged in the farther development and improvement of the resources of the fine country which already bears such indisputable proofs of their persevering and well-directed industry.

So far as the opinion of the colonists of New South Wales can be gathered from their petitions and recorded opinions, they object to the abrogation of their present

electoral franchise, by the transfer of their votes to electoral colleges or district councils, by which the elective power would be lodged in the hands of small irresponsible bodies, who practically would, in many instances, be nominated by the governor; and, even if that were not the case, would be probably directed by other influences than those of their constituents. But I cannot find throughout the official documents any conclusive expression against the establishment of two houses of legislature, such as now exist in Canada, Nova Scotia, New Brunswick, Prince Edward Island, Newfoundland, Jamaica, and other possessions of the crown; and which, even in Canada, have worked well for the past ten years. My own opinions on this point have long been recorded; while advocating the fullest grant of political liberty to our colonies consistent with their relation to the parent and governing state, I have always contended, that the link of political connection should not depend merely on a governor representing the crown. In my work on the *Colonial Policy of the British Empire*, published in 1837, the opinions I then and still entertain, are expressed as follows:—

Centuries of experience have demonstrated the beneficial practical working of the British constitution in its three constituent, independent, and yet harmonizing branches of king, lords, and commons; and as far as it is possible, and at suitable periods, I would wish to see the colonies enjoying similar constitutions; the governor representing the crown, the legislative council the lords, and the house of assembly the commons. It must be gratifying to all friends of rational freedom to reflect, that England has ever been foremost in bestowing on her distant settlements the advantages of her own political institutes, thus evincing a true sense of justice; whereas, as Montesquieu rightly observes, a republic governs its conquered provinces with more absolute and intolerable sway than a monarchy, and its remote possessions suffer all the evils without enjoying any of the advantages of monarchical government. With certain limitations elsewhere explained, the colonies enjoy all the advantages of the British constitution, so far as is compatible with their situation as distant provinces of an empire. The limitation of exception is, that the Legislative Council is nominated by the crown for life, or during the official tenure of those civil servants who are *ex officio* entitled to a seat in the Legislative Council. A question has, however, been recently raised by a party in Lower Canada,* as to the advantage of making the Legislative Council an elective body, instead of being, as at present, nominated by the king through the secretary of state. However desirous I feel for the extension of just principles, I cannot—looking to the slow progress

* This chapter was written in October, 1836, and consequently, before the debates on Lower Canada, relative to an elective Legislative Council, came on in the British parliament.

of rational freedom, and remembering that moral and mental independence of character are essentially necessary to the due exercise of the elective franchise—I cannot desire, either in the mother country or in her colonies, two elective chambers.

It may be said that the upper house (Legislative Council,) would be chosen by a higher class of electors than those who return members to the lower house, and that, therefore, the popular voice would be more calmly exercised, and property would have its due weight in the making of laws for the country;* but it is impossible to deny that even the higher classes in England (and how much more so in the colonies) are, to a certain extent, liable to great excitement, that their will is not always under the control of their reason, and that in times of political effervescence they would be almost as subject to the influence of their stormy passions as their poorer, though equally honest brethren. Those who have not mixed in colonial society can have but a faint idea of the extent to which party feeling on political subjects arrives; the animosities thus produced are of the bitterest nature—poisoning the very core of society, and destroying even the peace of families. Now, looking at domestic tranquillity, security of person, lightness of taxation, and freedom from oppressive laws, as the great and desirable advantages of political institutes, it would be insanity or criminality to throw a firebrand into the small community of a colony, with a pretence of gaining some utopian object.

Independently, however, of social considerations, we have no instance on record of any state long maintaining its political freedom either under a single chamber of representatives, or under two elective chambers, the one holding no control or check over the other, and both at the mercy of fluctuating popular favouritism, jealousy, and caprice. Since the abolition of the hereditary chamber of peers in France, but few traces of liberty have remained to the people, and the restoration of an hereditary peerage is now seriously entreated. The very antagonistic forces which an hereditary and an elective chamber exercise, are essential to the preservation of the powers of both. Gibbon, in reference to the Roman republic, correctly observes—"as both the consuls and the tribunes in their public and private interests were averse to each other, their mutual conflicts contributed for the most part to strengthen rather than to destroy the balance of the constitution; but when the consular and tribunitian powers were united—when they were vested for life in a single person—when the general of the army was at the same time the minister of the senate, and the representative of the Roman people, it was impossible to resist the exercise, nor was it easy to define the limits, of his imperial prerogative."[†]

The United States may be cited, perhaps, as an example in favour of the adoption of two elective chambers; but it should be remembered, that a few centuries of such government must be experienced, ere we pronounce authoritatively on a subject which

inspires with well-founded alarm, the most honest and able statesmen, who clearly see with Gibbon, that in elective monarchies the vacancy of the throne is a moment big with danger and mischief. We must wait and witness the effects of civilization, of a dense population, of adverse interests; we must watch the conduct of men who, like Marius and Cæsar, commenced by declaring themselves the protectors of the people, and ended by subverting the liberties of their country. Moreover, we should remember that the United States are a republic, and I do not think England is disposed to change her hereditary, constitutional monarch for an annual or quinquennial president.

Let us hear, however, the language of the most enlightened men of the United States on this important subject. Judge Story, himself a republican, in his commentaries on the constitution of the United States of America, in treating of the senate thus expresses his views on this topic: "Another and most important advantage arising from this ingredient is, the great difference which it creates in the elements of the two branches of the legislature; which constitutes a great desideratum in every practical division of legislative power. In fact, this division (as has been already intimated,) is of little or no intrinsic value, unless it is so organised, that each can operate as a real check upon undue and rash legislation. If each branch is substantially framed upon the same plan, the advantages of the division are shadowy and imaginative: the visions and speculations of the brain, and not the waking thoughts of statesmen or patriots. It may be safely asserted, that for all the purposes of liberty, and security of stable laws, and of solid institutions, of personal rights, and of the protection of property, a single branch is quite as good as two, if their composition is the same, and their spirit and impulses the same. Each will act as the other does; and each will be led by some common influence of ambition, or intrigue, or passion, to the same disregard of public interests and the same indifference to and prostration of private rights. It will only be a duplication of the evils of oppression and rashness, with a duplication of obstruction to effective redress. In this view the organization of the senate becomes of inestimable value.' Again he says, 'The improbability of sinister combination will always be in proportion to the dissimilarity of the genius of the two bodies; and therefore every circumstance consistent with harmony in all proper measures, which points out a distinct organization of the component materials of each, is desirable.'

Another eminent writer on the constitution of the United States, the late chancellor Kent, in treating of the necessity of the powers of government being placed in separate hands, says: 'The division of the legislature into two separate and independent branches is founded on such obvious principles of good policy, and is so strongly recommended by the unequivocal language of experience, that it has obtained the general approbation of the people of this country. One great object of this separation of the

the people; in Connecticut and Rhode Island, the governor was elected by the colonists; and in some the revenue officers who collected the taxes were assessed by the people. Pennsylvania, which was a proprietary government, was a scene of never-ending contentions, and the colonists even petitioned the king to take its affairs under the management of the crown.

† *Decline and Fall* vol i. p. 105.

* Mr. Labouchere, a gentleman whom I much respect, stated, in the Canada debate in the House of Commons on the 8th March, 1837, that the old American colonies of England had elective legislative councils; but it will be found that it was the chartered and not the crown colonies which had such assemblies. Adam Smith says, that in three of the governments of the New England colonies, the legislative councils were chosen by the representatives of

legislatures into two houses acting separately, and with co-ordinate powers, is to destroy the evil effects of sudden and strong excitement and of precipitate measures, springing from passion, caprice, prejudice, personal influence, and party intrigue, and which have been found by sad experience, to exercise a potent and dangerous sway in single assemblies. A hasty decision is not so likely to arrive at the solemnities of a law when it is to be arrested in its course and made to undergo the deliberation, and probably the jealous and critical revision, of another and a rival body of men, sitting in a different place, and under better advantages, to avoid the prepossessions and correct the errors of the other branch. The legislatures of Pennsylvania and Georgia consisted originally of a single house.* The instability and passion which marked their proceedings were very visible at the time, and the subject of much public animadversion: and in the subsequent reform of their constitutions, the people were so sensible of this defect, and of the inconvenience they had suffered from it, that in both states a senate was introduced. No portion of the political history of mankind is more full of instructive lessons on this subject, or contains more striking proofs of the faction, instability, and misery of states under the dominion of a single, unchecked assembly, than those of the Italian republics of the middle ages, and which arose in great numbers, and with dazzling but transient splendour, in the interval between the fall of the western and eastern empire of the Romans. They were all alike ill-constituted, with a single unbalanced assembly. They were all alike miserable, and all ended in similar disgrace. Many speculative writers and theoretical politicians about the time of the commencement of the French revolution, were struck with the simplicity of a legislature with a single assembly, and concluded that more than one house was useless and expensive. This led the elder president Adams to write and publish his great work, entitled *A Defence of the Constitution of Government of the United States*, in which he vindicates with much learning and ability, the value and necessity of the division of the legislature into two branches, and of the distribution of the different powers of the government into distinct departments. He reviewed the history and examined the construction of all mixed and free governments, which had ever existed, from the earliest records of time, in order to deduce with more certainty and force this great practical truth, that single assemblies without check or balance, or a government with all authority collected into one centre, according to the notion of M. Turgot, were visionary, violent, intriguing, corrupt, and tyrannical dominations of majorities over minorities, and uniformly and rapidly terminating their career in a profligate despotism."

Mr. Jefferson, late President of the United States, in his remarks on the constitution of his native state, Virginia, says, "All the powers of government, legislative, executive, and judiciary, result to the legislative body. The concentrating these in the same hands is precisely the definition of a despotic government. It will be no alleviation, that these powers will be exercised by a plurality of hands, and not by a single one. One hundred and seventy-three despots would surely be as oppressive as one. Let those who doubt it, turn their eyes on the republic of Venice. An elective despotism is not the government

we fought for; but one which should not only be founded on free principles, but in which the powers of government should be so divided and balanced among several bodies of magistracy, as that no one could transcend their legal limits without being effectually checked and restrained by the others."

With reference, however, to the highly important consideration of having no check on the irregular exercise of popular power, the link that binds the colony to the mother country, so far as government can do so, would be materially, if not entirely injured by the substitution of an elective legislative council for one appointed by the crown through the functionaries of the state.

A governor, without any control over the two houses of legislature in a colony, would be reduced to a political cypher, and the adoption of the elective principle in a governor would soon take the place of his nomination by the king; in fact, the independence of, and separation from the mother country, would virtually occur, whether officially announced or otherwise, the colony thereby deriving all the advantages of the connection, while the parent state would lose everything which made the possession valuable to the empire.

It is not necessary to discuss here the relative advantages of the monarchical or elective principle in government; as before stated, the former has been tested by centuries in England, and found conducive to the greatest portion of happiness that a nation has yet possessed; so long, therefore, as a colony be united with Great Britain, it cannot be the desire or the interest of any practical statesman to alienate or weaken the just prerogatives and rightful power of the crown.

It seems to be totally forgotten by those who go the length of demanding an elective legislative council, that there is a wide difference between an imperial and a provincial government; that the former must of necessity have a control over the latter, so long as they maintain towards each other their relative positions of protecting and protected states. When the latter has ceased to be a colony, it is, of course, free to choose its own government, but so long as it remains in that state it has no right to ask, much less to demand, from the mother country democratic institutions which she herself does not possess, and the granting of which, if she did, would be fatal to all permanence of political or social connection.

The power held by the crown of appointing for life the members of the legislative council is, if properly regulated under the management of the proposed colonial board, of great benefit to the colony; it stimulates the wealthy and intelligent colonists to distinguish themselves, in order that they may attain the highest rank in their respective countries, and be deemed worthy the approbation of their sovereign. There is thus an honourable emulation kept up, which is of the most essential advantage in every community; for, as it is finely expressed by Sir William Blackstone (and the remark is as applicable to a colony as to the parent state), "The distinction of rank and honour is necessary in every well-governed state, in order to reward such as are eminent for their services to the public, in a manner most desirable to individuals, and yet without burden to the community; exciting thereby an ambitious yet laudable ardour, and generous emulation in others. And emulation, or virtuous ambition, is a spring of action which, however dangerous or invidious in a mere republic, or under a despotic sway, will certainly be

* Franklin's favourite but mistaken idea was a single legislature and a plural executive.

attended with good effects under a free monarchy; where, without destroying its existence, its excesses may be continually restrained by that superior power from which all honour is derived. Such a spirit, when nationally diffused, gives life and vigour to the community; it sets all the wheels of government in motion, which, under a wise regulator, may be directed to any beneficial purpose; and thereby every individual may be made subservient to the public good, while he principally means to promote his own particular views.

"A body of nobility is also more peculiarly necessary in our mixed and compounded constitution, in order to support the rights of both the crown and the people, by forming a barrier to withstand the encroachments of both. It creates and preserves that gradual scale of dignity, which proceeds from the peasant to the prince; rising like a pyramid from a broad foundation, and diminishing to a point as it rises. It is this ascending and contracting proportion that adds stability to any government; for when the departure is sudden from one extreme to the other, we may pronounce that state to be precarious.

"The nobility, therefore, are the pillars which are reared from among the people, more immediately to support the throne; and if that falls, they must be also buried under its ruins. Accordingly, when in the last century the Commons had determined to extirpate monarchy, they also voted the House of Lords to be useless and dangerous. And since titles of nobility are thus expedient in the state, it is also expedient that their owners should form an independent and separate branch of the legislature. If they were confounded with the mass of the people, and, like them, had only a vote in electing representatives, their privileges would soon be borne down and overwhelmed by the popular torrent, which would effectually level all distinctions. It is, therefore, highly necessary that the body of nobles should have a distinct assembly, distinct deliberations, and distinct powers from the commons."*

The bill for the government of the Australian colonies is now (15th March, 1850) before the Imperial Parliament, where it will doubtless receive a fair and full discussion. I have conferred with no member of the legislature thereon; received no private information; and formed my judgment solely from the facts published by parliament; and believing that it is the anxious desire of the queen, of her Majesty's ministers, and of all parties in both the Houses of Lords and Commons, to act with a just and liberal spirit towards the Australian colonies, I can only venture to express an earnest hope, that a measure conducive to the happiness of the colonists, and calculated to maintain their connection with England, may be the result of the deliberations of the Imperial Legislature.

LAWS AND COURTS.—The statute laws of England are in force in the colony, aided by acts of Parliament and local enactments by

* The state of France, in 1850, under a single chamber, is a practical illustration of the dangers attendant on one Legislative Assembly.

VOL. I.

the governor and Legislative Council. An Insolvent Debtors' Act is in operation, the benefit of which may be obtained by an insolvent a second or third time, if he pay fifteen shillings in the pound. Any public officer taking advantage of the provisions of the Insolvent Act, is, by an order of the secretary of state, dismissed the service. The execution of the laws devolves upon a supreme court, presided over by a chief and two puisne judges, whose powers are as extensive as those of the courts of King's Bench, Common Pleas, and Exchequer, at Westminster. The supreme court is a court of *oyer and terminer*, and *gaol delivery*; it is also a court of *equity*, with all the power, within its jurisdiction, of the lord high chancellor of England; and it is a court of *admiralty* for criminal offences, within certain limits; it is empowered to grant letters of administration, and it is an insolvent debtors' court. From the supreme court an appeal lies in all actions, when the sum or matter at issue exceeds the value of £500, to the governor or acting governor, who is directed to hold a court of appeals, from which a final appeal lies to the Queen in council. The supreme court is provided with an attorney and solicitor-general. There are 36 barristers, and 144 solicitors practising in the court. The sheriff exercises, by his deputies, the duties of his office over the whole territory. Circuit courts are held in different parts of the colony; they are courts of record, and stand in the same relation to the supreme court as courts of *oyer and terminer*, and of *assize and nisi prius*, in England, do to the king's superior courts of record at Westminster. Courts of general and quarter sessions have the same powers as those of England, and while the colony was a penal settlement, they might also take cognizance, in a summary way, of all crimes not punishable by death, committed by convicts whose sentences had not expired, or had not been remitted.

A vice-admiralty court, presided over by the chief justice of the supreme court, takes cognizance of civil cases only, such as seamen's wages, &c. There is an ecclesiastical court for clerical matters; but this court has no jurisdiction in testamentary affairs, the charter of justice having empowered the supreme court to grant letters of administration, and direct the distribution of testators' effects. Courts of requests have been established under authority 9 Geo. IV., c. 83, for summarily determining claims not ex-

ceeding £10 sterling, except the matter in question relates to the title of any lands, tenements, or hereditaments, or to the taking or demanding of any duty payable to her Majesty, or to any fee of office, annual rents, or other such matter, where rights in future would be bound, or to a general right or duty, and to award costs.* The decision of the court is final and summary, as in England. One commissioner, appointed by the crown, presides in all the courts of requests throughout the colony.

Imprisonment for debt was abolished by the Insolvent Act passed in 1844, on the grounds:—1st. That the imprisonment of the debtor gave a vindictive creditor the power of depriving other creditors of their right to benefit by the labour of their debtor; 2nd. That it drove the debtor, however much he might wish to devote his energies to the payment of his obligations, to seek refuge in the insolvent court. By the assent of a majority of the creditors, a debtor under this act may make a voluntary assignment of his property to the trustees appointed by the creditors, provided such assignment be published three times in one of the Sydney newspapers.

In the earlier stages of the colony, criminal juries were formed of naval and military officers, and civil causes were determined by a judge and two sworn assessors. Now juries, selected as in England, sit in all civil and criminal cases. In 1844 a new jury law was passed by the colonial Legislative Council, by which in civil cases there need only be four jurymen; if, after deliberating four hours, they cannot arrive at a unanimous judgment, the opinion of three-fourths may be taken as conclusive; and if, after deliberating twelve hours, the jury of four cannot agree, a new trial must take place. Mr. Baker, a lawyer of the Inner Temple, who visited New South Wales, says that the "Sydney bar is highly respectable in character, and is, certainly, the most numerous, and perhaps, taken as a whole, the best English bar out of England; several of its members earn from £1,000 to £3,000 a-year, or more." Mr. Baker fancied himself "transported to England," on entering the Supreme Court at Sydney, and seeing three judges on the bench, the registrar and other officers at their feet, the attorney-general and solicitor-general in their silk gowns, the crowd of "learned" gentlemen behind them;

* These powers are so laid down by Mr. H. W. Parker, in Mr. Clark's *Summary of Colonial Law*.

all, from the judges downwards, duly wigged and robed, and the attorneys, hardly discernible from amidst the heaps of red and blue bags, and piles of red-tape bundles, in which they delight to bury themselves. Coroners are stationed in different districts, and great attention is rightly paid to this ancient and very important branch of jurisprudence. There are benches of unpaid magistrates at Sydney and in all the principal towns in the colony, aided by civil constables and a mounted police. There are several stipendiary magistrates.

MILITARY DEFENCE.—New South Wales and the other Australian colonies are perfectly defenceless against a foreign enemy; a hostile fleet might enter Sydney Cove, plunder the merchant shipping in the harbour, and lay the capital under contribution, without any effectual resistance being offered, for the few British troops that are in the colony are scattered at different outposts, and there is no militia in existence; and yet at a comparatively small cost, the harbour of Port Jackson, which would hold the entire fleet of England, might be rendered perfectly impregnable, and be made one of the strongest positions in the world. The entrance of Port Jackson is formed by two lofty headlands, distant about one mile and-a-half from each other, and appear like gigantic lock-gates within which the noble haven expands for fifteen miles into numerous coves, where vessels lie as sheltered as if they were in the London Docks. On the north and south heads of Port Jackson, batteries mounted with sixty-eight pounders would effectually command the entrance, across which, in time of war, a chain-boom might be drawn, supported by buoys. Directly in front of the entrance is the elevated George's Head, on which a battery of heavy guns might also be advantageously placed; so that with these three batteries, no hostile ship, even with a leading wind, could enter without being destroyed or disabled. There are several other islets in the harbour where well-constructed fortresses, and a citadel, with a few guns well manned, would tend to the effectual protection of Sydney Cove, and of the city; the few batteries now on either side of the Cove are merely fit for firing salutes. With the sea entrance well defended, it is not likely that any successful attempt could be made for the capture of the city of Sydney, by landing a force on the north-east shores of Botany Bay, as the Australians would be enabled to defend

their country on a line of fifteen miles of broken country, capable of being made very harassing to an enemy. It would be advisable that the colonists should immediately set about the defence of Port Jackson; appropriate annually a moderate sum towards the construction of batteries at the heads; obtain from England heavy-metalled guns, and boom chains of sufficient length. A small battalion of colonial artillery should be organised; and, for this purpose, the queen would probably permit some of the most efficient gunners in the royal artillery to be drafted into the Australian corps. It is also indispensable to the security of the Australian colonies, that a militia law be passed, providing for the embodiment and training of every man between eighteen and forty-five years of age, capable of bearing arms, as is the case in our North American provinces, and other colonies. Canada, Nova Scotia, New Brunswick, Newfoundland, and even Prince Edward Island, have each an effective militia; and, in the event of hostilities with the United States, or any other country, they could bring immediately into the field, fully armed and equipped, at least a quarter of a million of trained soldiery. New South Wales, and the other Australian colonies, under their new constitution, will possess full control over their own revenue and expenditure; and they cannot expect the people of England to pay, out of the exchequer of this heavily-taxed country, for their fortifications and military defence. In time of war, England would, without doubt, send her fleets and troops to every part of this wide-spread empire; but her best defence must be the patriotism and bravery of the colonists themselves. During the American war of 1811-12, the French and English Canadian militia successfully resisted the American troops of the line; and but for the gallant conduct of that loyal body of British subjects, the regular regiments of our soldiery would have been inadequate to the defence of Canada. Thus must it be with the Australian colonists. The Imperial Parliament is granting them perfectly free institutions; and one of its necessary conditions must be, the providing adequately for their own defence against aggression. The number of her Majesty's troops in the several settlements in Australia, in Van Diemen's Island, and in New Zealand, is stated to be about 2,500; but, of these, nearly a moiety are stationed at New Zealand, in consequence of the recent hosti-

lities between the British and the aborigines; and a large number are employed at Van Diemen's Island, in guarding the convicts sent from England; it is unfair, therefore, to speak of New South Wales being a heavy charge to the crown for military protection; the colonists are quite able to provide their own internal police, and do not require British soldiers for that purpose. As regards Victoria or Port Phillip—Melbourne, the capital, and the harbour of Geelong, have not a single gun for their protection; Southern and Western Australia, and Van Diemen's Island, are also without defensive batteries or militia; and no time should be lost by the colonists in placing their territories in a state capable, at least, of some protection; for it is impossible to say, in the present anomalous state of Europe, how long England, or any other country, may enjoy the blessings of peace. For myself, I hate war; it engenders every bad passion in human nature; and is, consequently, repugnant to the first principles of Christianity, while, in a mere economical sense, it dissipates wealth, destroys industry, and converts men into mere machines for the slaughter of each other; but my own limited experience in the naval and military service of the crown, has taught me to estimate the value of an effective national defence, as being, under Providence, the best security for peace. The nation that would preserve its independence, in the present imperfect state of practical Christianity, must maintain a standing army and a fleet afloat; and this necessity will continue until the day arrive, when "nation shall no longer rise up against nation, neither shall they learn war any more." Then, indeed, may we "turn our swords into pruning-hooks;" but, until then, we must keep them in readiness, though the less they are used the better.

The number of troops of the line in New South Wales and Port Phillip, in December, 1848, was—field-officers, 6; officers, 42; non-commissioned officers and privates, 908 = 1,046. The troops are widely scattered, viz.—at Sydney, and in the forts in the Harbour, 706; Fort Macquarie, 12; Goat Island, 13; Cockatoo Island, 58; Paramatta (15 miles from Sydney), 29; Blackheath (66 miles), 48; Newcastle (75 miles), 28; Moreton Bay (450 miles), 34; Port Phillip (600 miles), 58; attached to mounted police, 20. The mounted police consists of 6 officers; 18 serjeants; 13 corporals; troopers, 74 mounted; 19 dismounted = 130.

CHAPTER VI.

REVENUE AND EXPENDITURE OF NEW SOUTH WALES, MONETARY STATE, &c.

For several years, the expenditure required for the maintenance of New South Wales, as a penal settlement, was borne chiefly by the British exchequer. The committee of the House of Commons, which sat in 1837-38, on transportation, referring to the cost of New South Wales and of Van Diemen's Island, as penal settlements, adduce the following statement:—

"It has been impossible for your committee to obtain an accurate statement of the total amount of British funds expended on the two penal colonies since their foundation, as the accounts have hitherto been kept principally with a view to their examination and audit, and not framed so as to afford the statistical information required. The sum really expended on account of the penal colonies, exceeds the subjoined estimate, which, however, may be considered sufficiently to approximate to the true amount, to give the house an idea of what has been the cost of the punishment of transportation:—

Cost of the transport of convicts . . .	£2,729,790
Disbursements for general, convict, and colonial services . . .	4,091,581
Military expenditure . . .	1,632,302
Ordnance . . .	29,846

Total from 1786 to 31st March, 1837, 8,483,519
Deduct premium on Bills, Coins, &c., 507,195

£7,976,324

"The number of convicts transported to New South Wales and Van Diemen's Land up to the end of the year 1836, were 96,558; their conveyance to those colonies has, therefore, cost about £28 per head on the average; and the various expenses consequent upon their residence and punishment there has been at least £54 a head, in all more than £82 a head, how much more it is impossible for your committee to ascertain.

"The expense entailed upon this country by the penal colonies, has been, on the average since their commencement, £156,398 a year; but at present the annual expenditure is more than treble that amount, and is rapidly increasing every year. That expenditure can now be ascertained with considerable accuracy, as the commissariat accounts have been kept in an improved form since 1832. It should be remarked that the estimates for the penal colonies are not voted in one sum, but are scattered through various portions of the general estimates; for instance, the transport of convicts is defrayed out of the navy estimates; the pay of troops, out of the army estimates; the maintenance, &c., out of the miscellaneous estimates; the various dry stores required, out of the ordnance estimates, and innumerable sundries are paid out of the army extraordinaries.

"The following was the expenditure of this country on account of New South Wales and Van Diemen's Land in the years 1836-37:—

NEW SOUTH WALES:—

Ordinaries of the army . . .	£46,801
Commissariat . . .	3,450
Ordnance . . .	12,014
Navy . . .	4,641
Extraordinaries of the army . . .	55,625
Special disbursements for convicts . . .	127,949

VAN DIEMEN'S LAND:—

Ordinaries of the army . . .	16,354
Commissariat . . .	2,059
Ordnance . . .	11,625
Navy . . .	515
Extraordinaries of the army . . .	20,867
Special disbursements for convicts . . .	113,083
Transport of convicts . . .	73,030

Total expenditure . . . £488,013

"In 1836 the number of convicts in the two colonies amounted to above 60,000, and in that year the cost to this country was little more than £6: 16s. a head; in the same year about 5,475 persons were transported at the expense of about £13: 6s. a head. In these estimates of the expense of the system of transportation, neither the cost of the convict establishment at Bermuda, nor of the hulks at home, are included."

It is evident, from the foregoing statement, that without reference to the moral part of the question of transportation, it is the cheapest mode of disposing of our criminals. Including all the heavy charges from 1787 to the close of the war in 1815, it appears that about 100,000 convicts have cost less than £8,000,000, or £80 each. Taking the average period of sentence at ten years for each prisoner, this shews a charge of about £8 a year for each convict, and during the year 1836, it was only £6: 16s. Under the most economical management, a convict costs, in the Milbank Penitentiary, England, all things included, £25 a year; four times what he would cost the state, if a proper system of penal colonization were carried into effect; and the details in this volume prove the great amount of moral reformation which has taken place in New South Wales. The retention, in the United Kingdom, of 5,000 convicts a-year, would soon prove a heavy charge on the home exchequer; and when the period of their imprisonment is fulfilled, what is to become of them? The most humane and Christian policy is the foundation of settlements like that of New South Wales.

REVENUE.—It is unnecessary to enter into details of the early collections of revenue

in the colony. The limited number of free inhabitants, the few exportable products they possessed for several years, and the disinclination of the home government to press heavily on the colonists, prevented any endeavour to levy a large income for even their local government. The following statement of the revenue of the colony of New South Wales, from 1824 to 1848, is given in detail in a Parliamentary paper of 27th August, 1839, and subsequently from various returns. (It includes Port Phillip)—

Year.	General Revenue.	From Land.	Total.
1824	£49,191	£279	£49,471
1825	65,733	5,948	71,681
1826	69,478	2,742	72,220
1827	75,495	2,814	79,309
1828	91,306	5,437	96,743
1829	99,475	3,309	102,784
1830	102,743	1,985	104,729
1831	117,447	3,617	121,065
1832	122,163	13,683	135,847
1833	138,469	26,272	164,741
1834	161,960	43,482	205,442
1835	184,268	89,380	273,648
1836	198,129	132,396	330,526
1837	226,900	127,866	354,766
1838	220,780	125,729	346,509
1839	252,996	172,273	425,269
1840	332,332	354,060	686,392
1841	370,273	117,120	487,393
1842	371,937	63,149	435,086
1843	322,388	47,742	370,130
1844	274,185	44,524	318,709
1845	288,788	69,557	357,345
1846	270,550	76,271	346,821
1847	275,543	122,843	398,386
1848	295,566	105,281	400,847

The general revenue included duties on spirits imported or distilled in the colony; on tobacco imported; five per cent., *ad valorem*, on goods imported; fees, fines, licences, and other miscellaneous items. The total sum collected during the fourteen years ending 1837, on these branches of taxation, was £1,702,762. Of this, the *spirits imported* yielded £1,051,624; spirits distilled in colony, £15,364. Tobacco, £133,778; malt and spirit retail licences, £90,770; five per cent. custom duties, £79,535; fees of public officers, £74,296; proceeds of sales of different things, £48,652; tolls, ferries, and markets, £40,042; post-office collections (from 1828), £29,988; wharfage dues, £27,581; auction duties, £25,410. The other items were under £20,000. The total income derived from land, during the same period, was £460,217; of this, £428,936 were the proceeds of land sold, and £13,150 quit-rents. The amount of land sold in the first year of the period, was

£279; in the last year, £120,427. This statement shows a heavy taxation.

The details of fixed revenue of New South Wales (not including Port Phillip) for the year 1847-48, are thus shown:—

Items.	1847.	1848.
DUTIES:—		
On spirits imported . . .	£58,715	£63,851
Ditto, distilled in colony . .	14,091	9,231
Tobacco, imported . . .	38,915	36,089
<i>Ad val.</i> on goods imported . .	26,956	18,985
Tonnage on shipping in sup- port of water police . . .	627	695
Wharfage	1,339	1,165
DUES:—		
Entrance and clearance of vessels	696	807
Light house	709	890
Harbour	681	742
Post office collections . . .	14,103	14,458
Auction duty	4,834	3,249
LICENCES:—		
Auctioneers'	433	587
Retail spirits, &c.	20,615	22,999
Night and day billiard tables	2,110	2,440
Distillers' and rectifiers' . .	75	75
Hawkers' and pedlars' . . .	241	264
Rent of tolls and ferries . .	5,331	3,972
Assessment on live stock be- yond Settled Districts* . .	1,127	14,095
Fees in public offices . . .	9,631	9,730
Fines of courts of justice, &c. .	1,510	2,505
Incidental	4,921	2,681
Ditto	751	4,176
TERRITORIAL OR CROWN:—		
Sale of crown lands, and town allotments, &c.	8,129	7,036
Quit Rents	824	4,277
Redemption of ditto	13,914	147
Licences for depasturing stock within Settled Districts. . .	2,836	1,166
Ditto beyond ditto	23,821	26,490
To cut timber on crown lands	218	344
Rent of quarries	5	10
Rent of government build- ings and premises	91	140
Collections for church and school estates	4,682	4,116
Other territorial sources . . .	249	35
Special receipts and surcharges.	1,640	2
Total revenue and receipts	264,820	267,449

The territorial revenue for 1848, in the colony, including New South Wales and Port Phillip, was £103,284; and the total revenue and receipts for the same year, of the territorial and general taxation and assessments, &c., was £401,850.

* *The assessment on stock depastured on crown lands, beyond the settled districts of New South Wales: annually was—every horse, 3*d.*; head of horned cattle, 1*½d.*; each sheep, *½d.* Pending the issue of licenses, under her Majesty's order in council of 9th March, 1847, £10 for 4,000 sheep and forty head of cattle, and a proportionate increase for larger numbers. (See next page for other sources of revenue.)*

566 DETAILS OF EXPENDITURE IN NEW SOUTH WALES, 1847-8.

The expenditure in detail of New South Wales alone, exclusive of Port Phillip, was—

Items.	1847.	1848.
CIVIL :—		
Governor and establishment .	£5,561	£5,645
Executive Council	488	582
Legislative Council	3,327	2,657
Col. Secretary's department .	6,098	6,534
Registrar-General's " . . .	970	1,007
Col. Treasurer's "	3,633	3,814
Auditor-General's "	2,802	2,999
Customs' "	11,066	10,747
Chief Ins. of Distilleries " .	1,525	1,605
Post Office "	12,194	14,707
Post Master's "	3,212	4,369
Col. Architect's "	1,309	1,269
Col. Storekeeper's "	859	1,120
Botanic Garden "	528	891
Government Printer's " . . .	1,546	2,002
Total	55,123	35,593
JUDICIAL :—		
Supreme Court department .	8,729	8,995
Crown Law Officers' " . . .	3,520	3,243
Insolvent Estates "	441	506
Courts of Qr. Sessions " . .	2,193	2,223
" of Requests "	2,096	2,270
Sheriffs' "	2,788	2,829
Coroners' "	1,706	1,997
Total	21,480	22,067
POLICE* :—		
Sydney City police	7,769	7,464
" Water "	1,182	1,432
Within settled Districts . . .	21,387	21,229
Beyond the settled Districts .	5,067	8,365
Mounted police	10,942	9,177
Border "	1,376	—
Native "	—	227
Total	47,725	47,897
GAOLS :—		
Sydney	£3,180	£3,466
Country districts	4,336	4,246
Total	7,516	7,713
MEDICAL :—		
Health Officer and Med. Board	326	325
Lunatic Asylum	3,044	3,794
Total	3,370	4,119
CLERGY AND CHURCHES :—		
Ch. of England established . .	14,401	14,114
Ditto building churches, &c. .	3,411	3,015
Presbyterian established . . .	2,101	2,127
Ditto building churches	182	400
Wesleyan established	800	662
Roman Catholic established . .	5,536	5,780
Ditto building chapels	1,812	3,088
Total	28,244	29,188

* There are 32 police districts in New South Wales. The police are in number 361. The average expense for this protection, to each inhabitant, is under 4s. per head.

Items.	1847.	1848.
SCHOOLS :—		
Protestant Male Orphan . . .	1,471	1,489
" Female Orphan	1,268	1,603
Church of England Public . . .	4,032	3,991
Presbyterian "	1,921	1,736
Wesleyan "	549	570
R. Cath. { Institution for Des- titute Children }	1,168	1,264
{ Public Schools }	1,846	1,784
Denominational School Board	—	137
National " "	—	4
Total	12,258	12,582
MISCELLANEOUS.		
Pensions paid in the colony . .	576	593
Public Institutions :—		
Support and medical treat- ment of free paupers	548	903
In aid of Sydney Dispensary.	627	763
Hospital, Paramatta	—	37
" Windsor	141	174
" Goulbourn	208	198
" Bathurst	139	69
" Maitland	188	224
Mechanics' School of Arts . . .	200	200
Colonial Museum	300	300
Vaccination	75	100
Public buildings and works . .	31,781	33,755
Witnesses Supreme Court . . .	1,806	2,210
" Quarter Sessions	903	1,213
Travelling expenses, judges, &c.	850	802
Advances to Col. Agent General	16,085	17,886
" towards new Mil. Barracks .	8,250	—
" on account Gov. New Zealand	153	2,304
" South Australia	—	299
" Van Diemen's Island	—	50
" Madras	—	36
Revenue and receipts returned .	3,282	3,728
All other disbursements	2,352	2,347
Total	68,473	68,196
Arrears of previous years . . .	349	917
Gross total, Sydney district .	244,541	252,638

Licences.—Annual: auctioneers, for all the colony, £15; for a police district, only £2; publicans, general, £30; wine and beer only, £10; billiard table, £10; to keep open after nine o'clock at night, £10; packet licence, for wines, &c., £2; confectioners, for ginger and spruce beer, £1, distilling, £50; rectifying and compounding, £25; hawkers and pedlars, £1; stage carriage, 5s.; carters, 2s. 6d.; porters and boatmen, 5s. each.

To cut timber on vacant crown lands, annually, £2, except cedar, which is £4.

The tolls and ferries in the colony are numerous, and the rates levied about the same as in England. The rate of customs duties is stated under *Commerce*. There is an extensive list of fees, which are exacted in

the different public offices in the colony, civil and ecclesiastical, and carried to the credit of the public revenue.

Auction duty.—Ten shillings on every hundred pounds sterling of the purchase-money.

Postage of letters.—Weighing less than half-an-ounce, not exceeding fifteen miles, 4*d.*; twenty, 5*d.*; thirty, 6*d.*; fifty, 7*d.*; eighty, 8*d.*; one hundred and twenty, 9*d.*; one hundred and seventy, 10*d.*; two hundred and thirty, 11*d.*; three hundred, 1*s.*; for every hundred miles above three hundred, 1*d.* By sea, from one part to another of the colony, 4*d.*; colonial newspapers, within the colony, for seven days, transmitted once as a single letter. Ship letters, for receipt or despatch, in addition to inland postage, 3*d.*, 6*d.*, 9*d.*, or 1*s.*, quadruple.

Total—in	1847.	1848.
Expenses	£558,891	£583,088
Revenue and receipts . .	534,594	551,246

The commissariat department in N.S.W.		
Paid for Military service in 1848	£45,326	
" Ordnance ditto	10,783	
Total military service	£70,716	

Convict service	14,651
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Not connected with the colony:—

Army, pensions, &c.	£8,608
Commissariat, pay and pension	625
Navy	10,224
Van Diemen's Island	32,506
New Zealand	83,776
North Australia	2,490
East India Company, advances to . . .	142
Excise	9
Irish government, police, pensions . . .	111

Total, not connected with the colony, £138,491

The expenses on account of 4,015 convicts in New South Wales, defrayed from the military chest, was £14,651.

In September, 1849, the governor of New South Wales had remitted to the lords of her Majesty's treasury £180,000, to pay the passage of emigrants from the United Kingdom during the year 1847–8. Of this sum, £100,000 was authorized to be raised in the colony, by the issue of debentures, secured on the territorial revenue of the colony. The debentures were issued in sums of £100 each, bearing interest at the rate of 3½*d.* per diem, or £4 18*s.* 10½*d.* per cent. per annum. They would be received as cash in payment for crown lands, but otherwise be redeemable at par within three years, at the option of the government, or within five years, at the option of the holder of a debenture.

The sums paid from the colonial treasury of New South Wales on account of immigration and quarantine, from 1832 to 1847, have been very large:—

—	1832–47.	1848.	Total.
Immigrants brought into the colony	£974,970	£105,026	£1,079,996
Passages of clergymen, missionaries, and others	11,760	—	11,760
Superintendence, maintenance, lodging, &c., after arrival in colony . . .	35,746	4,145	39,892
Quarantine	23,068	793	23,861
Total	1,045,544	109,965	1,155,510

This statement does not include the sum of £25,684, paid as interest on land and immigration debentures, issued to the extent of £149,700, of which the whole has been paid off.

BANKING.—Monetary system.—Previous to 1817, the circulating medium of the colony consisted principally of the private notes of merchants, traders, shopkeepers, and publicans, the amount being sometimes so low as sixpence. To remedy the evils attendant on such a state of things, the bank of New South Wales was, in 1817, incorporated by a charter under the seal of the colony, with a capital stock of £20,000 sterling, raised in shares of £100 each. The amount of shares subscribed was £12,600, and notes were issued by the bank for 2*s.* 6*d.*, 5*s.*, 10*s.*, £1, and £5. In the first year of its incorporation, the bills discounted by the bank amounted to only £12,193; in 1818 they rose to £81,672; in 1819 to £107,256; demonstrating the necessity that had existed for such an establishment, and the advantage and convenience that was found to result from it. Interest was not uncommon at the rate of ten per cent. per annum. The dividends declared in 1818 were at the rate of twelve per cent.; for 1819, twenty-one per cent.; for 1820 and 1821, twelve per cent.; and for 1822, fifteen per cent. The charter was granted for seven years, which was of course renewed. Each shareholder was responsible for the whole of the proceedings of the bank, thus giving greater stability to the institution, and securing a more careful management of its transactions. The bank seldom advances money upon real securities of any description, nor does it grant cash credits, or allow any interest upon current accounts, or permanent lodgments of cash. The capital of the bank of New South Wales was originally about £150,000, di-

vided into 1,500 shares of £100 each, and the amount of capital paid up about £35,000. The affairs of the institution are managed by a president and eleven directors, elected by the shareholders. Every £50 paid up gives a vote. In examining the proceedings of the bank in 1836, I noticed a remarkable fact, namely—that the establishment has never sustained any actual losses through the non-payment of the paper which it has discounted. Whether it has since sustained any losses, I am unable to say. Up to the year 1824, the bank discounted at the rate of eight per cent., after which the rate of discount was increased to ten per cent. The colonial government pays and receives in specie only; and in consequence of its receipts, from the customs, duties, sales, and leases of land, and other sources of revenue, having considerably exceeded the amount of its disbursements, it has frequently withdrawn from circulation nearly all the specie in the colony. In consequence of this, and the remittances occasionally made of specie to Canton and other places, with which a trade is carried on by the colonists, the bank of New South Wales, though far more than solvent, has more than once been under the necessity of suspending the payment of specie on demand. It is a fact, highly creditable to the bank and to the colonists in general, that when, owing to the severe drought during the panic which occurred in 1826, and which continued for three years with little intermission, there were bills to the amount of £18,000 over-due to the bank, while the whole capital did not, at that time, exceed £22,000. The confidence of the public was so great, that, by prudent management, not a sixpence of the over-due bills was lost, and the bank continued to pay a dividend all the time of from fifteen to twenty per cent. The reliance of the colonists on the stability and integrity of the establishment was so entire, that instead of any run being occasioned on the bank, the inhabitants, on the contrary, with one accord, poured into its coffers all the specie they could collect, and, by refraining from demanding it as much as possible, soon enabled the directors to resume cash payments. The bank issues notes from £1 to £20 and upwards. The capital at present paid up is about £125,000.

In 1836, a second bank was established at Sydney, termed the *Bank of Australia*, with a capital of £220,000. The *Bank of*

New South Wales was established, and largely supported by the emancipists; and the *Bank of Australia* by those colonists who arrived free in the country, and who acquired the title of exclusionists. For some years this new institution was highly prosperous, and it seemed to be a powerful rival to the other establishment. The yearly dividend varied from twelve to fifteen and twenty per cent.; but, in the disastrous period of 1842–3, the *Bank of Australia* became deeply involved, and largely indebted to the metropolitan *Bank of Australasia*: it has, consequently, become necessary, together with the *Sydney Bank*, to wind up affairs.

In May, 1835, a London company was incorporated by royal charter, and called the *Bank of Australasia*, with a large capital, for the purpose of establishing banks of issue and deposit in New South Wales, Van Diemen's Land, and other settlements in Australasia. One-half of the company's then capital (£200,000) was required to be paid up before the commencement of business, and the entire capital within two years. The stock was divided into 5,000 shares of £40 each (500 of which were reserved for allotment in the colonies), to be paid up as follows:—£10 per share at the time of subscribing; £7 at three months from that date; £6 at six months; £3 at nine months; £4 at twelve months; £5 at fifteen months; and £5 at eighteen months. The management of the company's affairs is vested in the London board of directors, appointed by the proprietors; and the banks in the colonies are conducted by local directors, and other persons duly qualified, appointed by the London directors. The paid up capital of this bank is now £900,000. Its manager in New South Wales unfortunately allowed the *Bank of Australia* to become largely indebted to its Sydney branch, and, for some time, no dividend has been declared. The verdict of the courts of law in England has established the validity of its claims on the *Bank of Australia*. The prosperity of the colony is reviving; and it is probable the shareholders will soon be in the periodical receipt of a fair dividend. This establishment has branches in New South Wales, Port Phillip, South Australia, and Van Diemen's Island.

The *Union Bank of Australia* was established in London in 1837, with a capital of £1,000,000. The institution was at once so favourably viewed, that the whole of its shares were taken as soon as issued, without

having been offered for sale by advertisement; and although the liability of each proprietor was not limited by a royal charter. Business was commenced by a junction with the *Tamar Bank* at Launceston, Van Diemen's Land; a branch was next opened at Hobart Town, Van Diemen's Land; then at Sydney, New South Wales; next at Melbourne, Port Phillip; and subsequently at New Zealand, and in other parts of Australasia. The number of branches is now ten; they are managed, as are those of the *Bank of Australasia*, by an excellent board of directors in London, with boards of local directors in the colonies.

This institution has been admirably conducted from its commencement; the dividends paid annually have ranged from six per cent. to ten, the average of the whole period has been eight per cent. The bank has now a paid up capital of £820,000, and a subscribed capital of £1,000,000. Through this excellent institution, as also through the *Bank of Australasia*, money may be safely and economically transmitted from England to any part of Australia, and *vice versa*.

The *Commercial Bank* at Sydney, New South Wales, is a modern establishment. It has a capital of £73,000 paid up. By prudence it withstood the recent commercial crisis, and pays a dividend of ten per cent. per annum.

An *Australian Trust Company*, has been

established in London by royal charter, with a capital of £1,000,000; I believe it operates principally by making advances on land, stock, &c.; its proceedings do not therefore appear among the banking returns; neither does the *Scottish Australian Investment Company*, whose funds are employed in advances in Australia. For the last few years the operations of such institutions must have been very difficult, but when the colonial depression passes away, the field for investment is large, lucrative, and, judiciously conducted, perfectly safe.

Savings' Banks are established in different parts of the colony. The deposits in them in February, 1849, were, at Sydney, by 3,606 depositors, £142,104; Windsor, 88 depositors, £2,496; Paramatta, 115 depositors, £2,287; Maitland, 89 depositors, £2,500; Bathurst, 78 depositors, £3,077; Penrith, four depositors, £120. The total deposits, including other sums, was £172,638.

The coin in the colony, in proportion to the population, was per head in 1836, £5 9s., in 1837, £5; in 1838, £5 6s.; in 1839, £4 10s.; in 1840, '41, '42, £3. This explains the commercial crisis of 1841-2.

The following is a general abstract of the sworn returns, rendered pursuant to the act of Council, 4th Victoria, No. 13, of the average assets and liabilities, and of the capital and profits of the undermentioned banks of the colony of New South Wales, for the quarter ending 31st March, 1849:—

Liabilities, Assets, Capital, &c.	New South Wales.	Commercial.	Australasia.	Union of Australia.	Total.
LIABILITIES:—					
Notes in circulation	£34,519	£31,226	£79,560	£90,369	£235,675
Bills in circulation	—	—	13,117	7,803	20,921
Balances due to other banks .	—	—	—	212	212
Deposits	225,767	152,735	354,781	412,070	1,145,354
Total liabilities	260,286	183,961	447,459	510,455	1,402,163
ASSETS:—					
Coin	157,564	90,958	146,774	245,610	640,908
Landed property	12,570	3,600	15,820	27,018	59,009
Notes and bills of other banks	—	47	1,376	—	1,424
Balances due from other banks	5,599	12,772	—	3,022	21,393
Notes and bills discounted, and all other debts due to the banks	225,793	152,566	779,240	467,159	1,624,760
Total Assets	401,528	259,945	943,212	742,810	2,347,497
CAPITAL AND PROFITS:—					
Capital paid up	125,283	72,955	900,000	820,000	1,918,238
Rate per annum of last dividend	8 per cent.	10 per cent.	Nil.	6 per cent.	—
Amount of dividend	5,011	3,237	—	25,317	33,566
Amount of reserved profits after paying dividend . . }	17,150	993	53,451	77,930	149,526

Note—Out of reserved profits of the N. S. Wales Bank, a bonus of 5 per cent. was, at the same time, paid to Shareholders; and a bonus of 6s. per share, equal to 2 per cent. was also paid by the Union Bank of Australia.

The quantity of coin in the colony for twelve years is thus shewn; it is to be observed that the local government deposits its treasure among the several banks, which will account for the small sum in the colonial treasury.

Coin in the Colonial Treasury, the Military Chest, and the several Banks, on 31st December in each year from 1837 to 1848, inclusive.

Year.	Colonial Treasury.	Military Chest.	Banks.	Total.
1837	£245,250	—	£182,182	£427,432
1838	163,000	—	357,127	520,127
1839	124,100	—	391,969	516,069
1840	38,900	£49,151	309,529	397,581
1841	25,000	10,000	427,624	462,624
1842	—	32,409	442,980	475,389
1843	—	3,000	420,972	423,972
1844	—	11,000	548,923	559,923
1845	20,000	54,315	780,850	855,166
1846	25,000	121,173	681,132	827,306
1847	30,600	30,056	573,529	634,186
1848	20,600	15,082	598,121	633,803

Of the whole coin, probably not £50,000 is in active circulation, which, added to about £150,000 bank notes in active circulation, will not give of paper and gold one pound per head annually for the circulating medium of the colony; whereas it ought at the least be five times that amount to facilitate the transfer of property, which takes place yearly to the amount of several millions. The sales by auction alone are now (1850) more than one million sterling annually, and this description of business has largely increased, as shewn in the following table:—

Auction Duty paid into the Colonial Treasury of New South Wales (including the District of Port Phillip) from the year 1834 to 1848, inclusive.

Year.	Amount of Duty.	Amount of Sales.
1834	£2,327	£155,156
1835	3,135	209,053
1836	4,697	313,171
1837	4,820	321,346
1838	6,137	409,166
1839	7,700	513,368
1840	18,701	1,246,742
1841	14,455	963,696
1842	10,291	686,088
1843	6,818	454,565
1844	4,662	310,831
1845	6,068	404,542
1846	6,217	414,490
1847	7,061	470,781
1848	4,551	787,800

Note.—From 1st January, 1848, the duty was reduced from 30s. to 10s. per cent., by Act of Council, 11th Victoria, No 16, but was made chargeable on all sales effected by licensed auctioneers by private bargain as well as by auction.

The amount of British coin in New South Wales on the 31st of December, 1848, was—In colonial treasury, £20,600; military chest, £15,082. *Banks*—New South Wales, £176,430; commercial, £79,724; Australasia, £137,887; Union, £204,078; in the hands of private individuals, supposed £20,000. Total, £653,803. Paper currency in circulation: *Banks*—New South Wales, £31,716; commercial, £25,601; Australasia, £74,292; Union, £74,194. Total, £205,803. This may be considered a sound state, when there is only £205,803 paper note circulation against £654,803 in coin. Such an amount of circulation is, however, far too small for the healthy business of the colony.

At the period of the commercial difficulties, in 1842–3, the local legislature passed a law “to give a preferable lien on wool, from season to season, and to make mortgages of sheep, cattle, and horses valid without delivery to the mortgagee.” This law, as regards live stock, was based on the principle that had been adopted for more than a century in the West Indies, where slaves were made real estate, and were literally walking freeholds, subject to all the incidents of freehold property. Although, in this respect, opposed to the spirit of the British laws, the colonial Legislative Council, after two years’ trial of the act, finding it beneficial to the colonists, recommended its continuance; and as live stock could not carry on its backs the muniments or title deeds belonging to real property, an efficient registry of all transactions respecting them was adopted. The annexed shows the amount of mortgages since 1843. (This return does not include the Port Phillip district). In a statement of the registrar-general, dated Sydney, 30th January, 1847, it is remarked that, in the return of the number of sheep and amount of money advanced under the Lien Act, it would appear as if an additional sum was advanced each subsequent year upon that mentioned to have been advanced the year previous. It must, however, be borne in mind that as the Lien Act only authorises an advance to be made on the ensuing clip of wool, the liens are renewable every year, and that consequently the same sheep and money may be included in one year as that mentioned for the previous year. The same remark may also apply to the mortgages of sheep, cattle, and horses, as the mortgages are generally made redeemable a twelvemonth from the date thereof.

In the return of the amount secured by mortgages of real estate, however, the repayment of the amount is upon an average required to be made every three or four years, consequently in the return under this head the same money may have been relent and resecured thrice within ten years.

Number and amount of preferable Liens on Wool, and of Mortgages on Live Stock, registered at Sydney.

Liens and Mortgages.	1843.	1844.	1845.	1846.	1847.	1848.
Preferable liens on wool:—						
Number of liens	54	139	125	149	199	240
Number of sheep	318,739	837,997	657,989	813,951	1,095,402	1,378,180
Amount of liens	£30,664	57,733	55,865	71,351	107,447	108,892
Mortgages on live stock:—						
Number of mortgages	96	226	152	146	168	205
Number of sheep	397,995	694,381	464,713	491,518	623,257	1,118,762
Number of cattle	44,430	81,879	49,131	42,870	45,578	84,411
Number of horses	903	2,158	1,568	1,070	1,110	2,056
Amount lent	£178,567	241,727	132,355	150,733	137,856	219,756

There are no usury laws in New South Wales. The Legislative Council recently proposed to reduce the legal rate of interest to not more than eight per cent.; but her Majesty's government rejected the proposition. It is not possible to state accurately, therefore, at what rates money is lent on wool and live stock, nor on mortgages of land; but the range is about eight to ten, or even twelve, per cent.

Return of the number and amount of Mortgages on Land in the colony of New South Wales, registered at Sydney, from the year 1837 to 1846, inclusive.

Year.	Lent on Town Lands.		Lent on Country Lands.		Lent on Town and Country Lands.		Total.	
	No. of Mortgages.	Amount.	No. of Mortgages.	Amount.	No. of Mortgages.	Amount.	No. of Mortgages.	Amount.
1837	145	£108,860	130	£102,817	11	£19,336	286	£231,014
1838	139	59,702	207	174,388	10	14,801	356	248,891
1839	159	112,835	213	189,447	11	46,534	383	348,818
1840	155	112,158	281	355,224	23	47,358	459	514,741
1841	241	266,944	417	643,111	51	188,685	709	1,098,741
1842	238	282,659	333	384,566	54	157,186	625	824,412
1843	246	275,386	285	333,487	51	446,707	582	1,055,580
1844	192	94,400	252	144,352	50	61,065	494	299,818
1845	135	111,659	152	107,585	31	53,577	318	272,822
1846	146	64,856	148	86,726	14	18,792	308	170,374
1847	156	81,516	149	82,605	15	16,432	320	180,554
1848	196	110,501	103	70,572	8	21,572	307	202,646

The colonists are not, certainly, largely in debt, either to capitalists or to the bank; and there appears fair grounds for assuming that their mercantile affairs are now in a sound and prosperous state.

PUBLIC COMPANIES.—There are several institutions in New South Wales connected with the commercial affairs of the colony. The *Australian Agricultural Company* was formed in London, by royal charter, in 1824. The design of the projectors was—

1st.—The breeding of horses, on an extensive scale, for sale in New South Wales and in India.

2nd.—The breeding of cattle and other live stock, the raising of corn, tobacco, &c., for the supply of residents in the colony, and the manufacture of salt.

3rd.—The introduction, at a future period, of wine, olive oil, hemp, flax, silk, opium, &c., as articles of export, and the raising of coal at Newcastle, N.S.W.

To enable the company to carry their objects into effect, a grant of 1,000,000 acres of land was made to them in fee simple by his Majesty's government. This grant has been selected in three locations, viz.—

At Liverpool Plains . . about 250,000 acres.
Peel's River " 310,000 "
Port Stephens " 440,000 "

Of this territory, the company have the power of leasing or selling 500,000 acres, after the expiration of five years, provided the sum of £100,000 shall have been expended on the land, in the formation of roads, the erection of buildings, clearing, cultivating, fencing, draining, or other improvements; and also of alienating any portion of the remaining 500,000 acres, by licence from his Majesty's secretary of state.

On the 31st of March, 1834, the total number of sheep belonging to the company were—French Merino, 4,940; Saxon Merino, 2,866; Anglo-Merino, 1,552; improved colonial, 27,254:—total of sheep, 36,615. Of horses, thorough-bred and Cleveland, and the produce of those breeds, 197; colonial ditto, 129; Welsh and Timor ponies, and their produce, 58: total, 384. Of cattle, Durham, 23; improved colonial, 330; Scotch, 51; improved colonial, 867; colonial, 1,305; working oxen, 227: total, 2,803.

The following is a return of the stock of horses, horned cattle, and sheep of the Australian Agricultural Company, at periods of five years from the establishment of the company to present date:—

Periods.	Horses.	Horned Cattle.	Sheep.
Formation of company	13	208	958
1830	245	2,227	21,365
1835	422	2,924	55,695
1840	569	5,187	79,961
1845	972	7,189	124,205
1850	not	yet	known.

Note.—Intermediately from the formation of the company to the year 1830, a considerable number of cattle and sheep were introduced by purchase and importation; in the year 1830 importation ceased; and from 1835 to 1845, large sales, slaughter for maintenance of establishment, and boiling down proceeded to a large extent; there were also some items of casualties—age, accident, and disease.

In the year 1825, a negotiation was concluded with his Majesty's government, by which the mines of coal in New South Wales which had been previously worked by the local government, were transferred to the company, with a grant of 2,000 acres of the coal field. These mines are situated at Newcastle, about sixty miles to the north of Sydney, at the south entrance of a secure harbour, called Port Hunter. The coal is being largely worked (see mines.) The arrangements with her Majesty's government are now satisfactorily concluded, and it is to be hoped that the shareholders who have invested their capital in this useful association to the amount of £300,000 will now begin to reap some reward for their well-directed exertions and sacrifices.

The Australian Agricultural Company is now offering for sale or lease all that portion of its valuable estate near Port Stephens, containing about half a million of acres, which are bounded by the river Manning, intersected by other streams, and provided with roads and bridges, which have been constructed by the company at a cost of

many thousand pounds. There are churches and schools, and a resident clergyman, school-master, and surgeon are paid by the company for the benefit of their servants.

The farms, which have been long in cultivation, with other erections, are offered for sale at twenty years' purchase on the estimated annual value.

The uncultivated land will be sold in lots of fifty acres and upwards, at £1 per acre; each £50 paid in England entitling the purchaser to a choice, and a free passage; and each lot will include a right of pasturage for stock on adjoining land until required for sale.

Among other institutions in the colony there is a *Savings' Bank* at Sydney; an *Australasian Colonial and General Life Assurance and Annuity Company*, whose head establishment is in London; a *Sydney Fire Insurance Company*; a branch of the *Imperial Fire Insurance Company* of London; an *Australian Gas Light Company*, with a capital of £45,000; a *Hunter River Steam Navigation Company*; a *Sugar Company*, and other public associations, which are well managed, and conducted with a degree of probity unsurpassed in any other community in the British empire.

The following brief chronological record illustrates the rise and growth of this remarkable section of the British empire:—

1789, one year after the establishment of the colony, *first* harvest reaped (at Paramatta): 1790, *first* settler (a convict) took possession of the land allotted him; 1791, *first* brick building finished; 1793, *first* purchase of colonial grain (1,200 bushels) by government; 1794, *first* church built; 1800, *first* copper coin circulated; 1803, *first* newspaper printed; 1804, Fort William built; 1805, *first* vessel built; 1810, *first* census, free school, toll-gates, police, naming of the streets, establishment of Sydney market, races, and race ball; 1811, *first* "pound;" 1813, *first* fair; 1815, *first* steam-engine; 1817, supreme court established, and *first* bank; 1818, benevolent society formed; 1819, orphan institution founded; 1820, *first* spirits distilled, and *first* colonial tobacco sold; 1821, *first* Wesleyan and Roman Catholic chapels built; 1822, freedom of the press granted, and *first* agricultural and reading societies formed; 1824, charter of justice granted, Legislative Council appointed by the crown, and *first* court of quarter sessions held; 1825, *first* criminal jury im-

pannelled, *first* archdeacon ordained, *first* coroner appointed, and *first* constitutional county meeting held; 1827, *first* daily newspaper established; 1829, *first* circuit court opened; 1830, *first* civil jury impanelled, and *first* college founded; 1831, *first* colonial steam-boat launched; 1832, *first* savings' bank instituted; 1833, mechanics' school of arts formed, and a monthly magazine established; 1834, land sold in Sydney at £20,000 per acre; 1835, *first* Protestant bishop of Australia; 1840, Legislative Council (twenty-four elective members, and twelve crown nominees), sheep sold at 1s.6d. each, and thousands "boiled down" for the sake of their tallow; 1842, Sydney incorporated (population about 40,000); money provided for emigration from 1832 to 1849, by the sale of land, one million and a quarter sterling; 1850, sheep in the colony nearly 12,000,000, horned cattle nearly 2,000,000, horses, 150,000, pigs 100,000, population estimated at 250,000, no convicts in the colony, and grant of a representative Assembly and responsible government to the colonists.

FUTURE PROSPECTS.—The rapid strides by which New South Wales has acquired its present position, are so extraordinary, as to raise fears for its duration. These fears would be only too well grounded, if the future prospects of this extensive country, and of its increasing population, depended solely on pastoral pursuits. Had New South Wales no agricultural capabilities, no mineral wealth, no fisheries, then indeed might we look forward with melancholy foreboding to the time when her vast pastures would be overthronged, as the epoch which sooner or later must arrive, and mark the period of decadence. But the pastoral age is the primary step in the history of a people possessed of the varied elements necessary to constitute a mighty and permanent empire. The reason is sufficiently evident; the pastoral resources of a newly-discovered region are naturally the most readily available to the settler, who from thence obtains not only present sustenance, but the means of developing the less prominent, but more intrinsically valuable capabilities of the soil.

That the colonists themselves are not disposed to consider their fine country as a vast "sheep walk," or to restrict their energies to the multiplication of flocks and herds, is evident from the facts adduced in the previous pages, and from the tone of their public jour-

nals. The editor of the *Sydney Morning Herald*, in a "leading article," dated 20th October, 1849, on the "Destinies of the colony," states, that according to the ratios of increase which have heretofore prevailed, the number of sheep in New South Wales will, in the year 1857, amount to *thirty-two million*, and the number of other live stock to *five and-a-quarter million*. For the depasturing of these animals, it is estimated an area of 231,000 square miles would be required. It is calculated, that in 1857, the sheep and other stock in New South Wales and Port Phillip, independent of those in Southern and Western Australia, will exceed *one hundred and forty-five million*, and require 875,000 square miles of pasturage, or about one-third the area of the whole island. This is assuming that about four acres are necessary to feed each head of live stock. Making ample allowance for the disturbing causes by which such calculations are affected, the urgent necessity for the production of other staple exports may be considered as sufficiently proved, although, of Australian wool alone (it may be right to add), England could receive for her domestic use and foreign exports, at least one hundred million pounds.

The first steps in the progress from the nomadic to the agricultural state, have been taken; New South Wales now not only grows sufficient grain for the consumption of her own people, but has become an exporting country; five years ago, its vineyards covered only 500 acres, now they extend over 1,000; and the wine made from them has increased, within the same period, from 30,000 to 100,000 gallons. The colonial mills have increased in nine years from seventy-seven to 172, and the domestic manufactures, in the same period, from fifty to 133. The vine, the olive, and the mulberry—cotton, sugar, and tobacco—hemp, timber, and tallow, may all be produced to an almost incalculable extent in Australia, and are all in constant and increasing demand in Europe. Humanly speaking, therefore, the welfare of this colony rests on a sound basis, and, with the blessing of Divine Providence, its future greatness may seem as marvellous to our descendants, as the position it has already attained appears to those whose lengthened span of life has enabled them to watch its progress from the infant, starving, struggling penal settlement at Sydney Cove, to the flourishing colony of New South Wales.

BOOK III.—VICTORIA, OR PORT PHILLIP.

CHAPTER I.

POSITION—BOUNDARIES—HISTORY—TOPOGRAPHY—GEOLOGY—AND CLIMATE.

THIS division of the island-continent of Australia, comprises the extreme southern portion, between the parallels of 37° and 39° S. lat., and the meridians of 141° and 150° E. long. The area is estimated at 97,000 square miles, i. e. about 10,000 square miles larger than England, Wales, and Scotland.* The chief harbour was called Port Phillip, after the first governor of New South Wales, when discovered by lieutenant Murray, in 1802. Sir T. Mitchell, who explored the country in 1836, gave it the name of Australia Felix, from the beauty of the scenery; and it is in future to be termed Victoria, in honour of our gracious sovereign.

In a bill now under discussion in parliament, for separating the district called Port Phillip from the Sydney or Middle District of New South Wales, erecting Port Phillip into a separate province, under the name of Victoria, and granting to the Australian colonies constitutional forms of government, this district is stated to be "bounded on the north and north-east by a straight line drawn from Cape Howe to the nearest source of the river Murray, and thence by the course of that river to the eastern boundary of the colony of South Australia." On the south it is separated from the island of Van Diemen, or Tasmania, by Bass' Strait.

HISTORY.—Captain Cook (of whom fuller mention will be made in the history of New Zealand,) visited the south coast of Australia, near Cape Howe, 19th April, 1770, and proceeded to the northward. After the British settlement was formed at Sydney Cove (Port Jackson) in 1788, attention was directed to a survey of the adjacent southern shores; and, in 1798, Mr. Bass, surgeon of H.M.S. *Reliance*, with a whale-boat and six men, sailed along the south-east coast, doubled the projecting cape termed Wilson's Promontory, entered the strait now called after him, and anchored in a harbour which

he termed Port Western, from its situation with reference to Sydney. His scanty supply of provisions compelled him to return to Port Jackson. The talents and intrepidity of this successful explorer, induced the governor of New South Wales to direct him, together with lieutenant Matthew Flinders, to prosecute the survey in a schooner, built at Norfolk Island, of twenty-five tons burthen. In this small vessel, named the *Norfolk*, these gallant officers sailed, in October and November, 1798, through Bass' Strait; and, as noted at p. 368, demonstrated the insularity of Tasmania. In March, 1802, lieutenant Murray, in command of H.M. brig *Nelson*, a vessel of sixty tons burthen, in which lieutenant Grant had sailed from England to Australia, entered a large harbour a little to the westward of Port Western; and a few weeks after, captain Flinders, in H.M.S. *Investigator*, visited the same noble haven, which received the name before-mentioned from captain Hunter, R.N., then governor of New South Wales, in honour of his esteemed predecessor. Flinders described the coast as "a grassy country, capable of supporting much cattle, though better adapted for sheep."

While captain Flinders was exploring the coast adjacent to Port Phillip, he fell in with captain Baudin, a French naval surveyor, who had given the name of *Terre Napoleon* to a considerable portion of the south coast previously visited by Flinders. His Majesty's government, probably with a view to prevent a French colony being there formed, and at the instigation of Flinders, determined, in 1803, to found another penal settlement at Port Phillip; and colonel Collins, of the royal marines, was sent from England with a fleet of convicts and a military guard. He reached his destination, and landed at Point Nepean, in 1804. Mr. Grimes, then surveyor-general of New South Wales, was despatched from Sydney to make a survey of the port; but he was evidently

* England, 50,400; Wales, 7,500; Scotland, 30,300; total, 88,200 square miles.

unfit for the duty assigned him; for he failed in discovering the river Yarra Yarra, and obtained water only by sinking wells in the sand.

Lieutenant-governor Collins, despairing of success, and finding that many of the convicts were endeavouring to escape by taking to the woods, re-embarked the prisoners and their guard, and proceeded to the Derwent river, in Van Diemen's island, where he landed, and in conjunction with lieutenant-colonel Patterson, who had been sent from Sydney, founded the settlement now known as Hobart Town. For twenty years from this period this portion of Australia was neglected. In 1824 Messrs. Hovell and Hume made an overland journey from Appin in Cumberland county, New South Wales, to the southward and westward, crossed the Murrumbidgee river, and after a severe and perilous journey, reached the sea coast, at a bay called Geelong by the natives, on the 16th of December, 1824. Geelong Bay forms the western portion of the haven of Port Phillip. In consequence of the representations of these gentlemen, the governor of New South Wales, in 1826, sent captain Weatherall, R.N., with a party of soldiers under captain Wright, to take possession of Western Port, and form there a station which might attract settlers. A small fort was erected at the east extremity of Phillip island, which lies across the mouth of the port, and the projected settlement was made upon the mainland of the opposite shore. Captain Weatherall reported that coal was to be found in the vicinity of the station, both on Phillip Island and at Cape Patterson; but although the description of the place was favourable, no settlers resorted thither, and in about two years the military and naval force was recalled, and the station abandoned. To the colonists of Van Diemen's Land is due the credit of having commenced the permanent settlement of Port Phillip. The colony which had been founded at the Derwent river, on the southern shores of Van Diemen's Island, in 1804, gradually extended to the river Tamar, at Launceston, on the northern shores of the island; and whaling establishments were formed in Bass's Strait, whence excursions were frequently made to the adjacent shores of Australia. The whalers, more intent on fishing than grazing, paid little attention to the Port Phillip shores, but rumours of a favourable character respecting a fine, grassy country reached the flock-owners of Van Diemen's Land, who

began to feel straitened for sheep pastures. At Two-fold Bay, a little to the northward of Cape Howe, an extensive cattle station was established by the Messrs. Imlay, from Sydney; and in 1834 a whaling station was fixed at Portland Bay by the Messrs. Henty, from Launceston. In April, 1835, six Launceston settlers, Messrs. S. and W. Jackson, John Pascoe Fawkner,* Marr, Evans, and Lancy, formed themselves into an association to proceed with their families and stock to the opposite shores of Port Phillip. It was necessary to send for a suitable vessel to Sydney; in the mean time their intention was made known, the proposition was favourably viewed, and became the absorbing topic of the day. Mr. John Batman, descended from European parents, and born at Paramatta, but then a settler in Van Diemen's Land, New South Wales, resolved to take the lead in this novel enterprize:—on the 12th of May, 1835, he embarked, with seven semi-civilized natives of New South Wales, in a small vessel at Launceston, Van Diemen's Land, and directed his course to Port Phillip, distant from the mouth of the Tamar 190 miles. Arriving at Port Phillip (called Iranmor by the natives), Batman landed, and on the day after his arrival met with a party of the aborigines on the banks of the Weirabee (the river Ex of the colonists),† to whom he explained that he intended for the future to reside among them, with his wife and seven daughters, and that he wished to purchase some of their land for depasturing his stock; and he presented them with blankets, tomahawks, knives, scissors, looking-glasses, and necklaces. The aborigines appeared disposed to entertain his proposition; he remained a month at Port Phillip, and seems to have conducted himself with considerable tact as well as good feeling,—he induced the natives to cede to him, his heirs, and successors, a tract of country “extending across from Geelong harbour about due south for ten miles, more or less, to the head of Port Phillip, taking in the whole neck or tract of land, and containing about 100,000 acres.” For this he agreed to render in return “a yearly rent or tribute of fifty pair of blankets, fifty knives, fifty tomahawks, fifty pairs of scissors, fifty looking-glasses,

* Credit is due to this gentleman for establishing the first newspaper in Port Phillip; it was issued in manuscript, but subsequently printed in a foolscap form, and is now (1850) a flourishing daily paper.

† See *Information on Australia Felix* in 1840, by George Arden, Esq., then the able editor of the *Port Phillip Gazette*.

twenty suits of slops or clothing, and two tons of flour." The deed of assignment was signed by Jaga-Jaga, Cooloolack, Bungarie, and others, eight of the natives, with a mark x. By another deed Batman purchased "all that tract of country situated and being at Port Phillip, running from the branch of the river at the top of the port, about seven miles from the mouth of the river forty miles north-east, and from thence westerly forty miles across Iramnoo Downs or Plains, and from thence S.S.W. across Mount Vilmarnatar to Geelong harbour, at the head of the same, and containing about 500,000 acres, more or less." For this Batman agreed to pay to the eight aborigines as annual rent or tribute, "100 pair of blankets, 100 knives, 100 tomahawks, fifty suits of clothing, fifty looking-glasses, fifty pairs of scissors, and five tons of flour." These deeds were signed and exchanged "on the banks of Batman's Creek, 6th of June, 1835." Batman promised also to protect the natives, to employ them in the same manner as the New South Wales aborigines, to clothe and feed them. He certainly seems to have gained the good-will of the Port Phillip savages. The total value of his proposed tribute was about £200 per annum. After leaving three Europeans and five New South Wales natives to erect a house, and prepare some ground, Batman re-embarked for Launceston on the 14th of June, and reached the Tamar river in thirty-six hours. On arriving in Van Diemen's Land he proceeded to Hobart Town, where an association, consisting at first of sixteen individuals, was quickly formed for the colonization of Port Phillip. Money was subscribed, and Batman appointed agent for the company.

Previous to departing from Hobart Town for Port Phillip, on his second journey, Batman addressed to colonel George Arthur (then lieutenant-governor of Van Diemen's Land) a letter, dated 25th June, 1835, in which he laid fully before the colonial government the course that he had adopted. He stated that, for the previous six years, he had been most actively employed in endeavouring to civilise the aborigines of Van Diemen's Land; that, under his guidance, the humane objects of the local government towards the aborigines had been carried into effect; that, in 1827, himself and Mr. Gellibrand had addressed a joint letter to the government of New South Wales, soliciting permission to occupy land at Port Phillip or Western Port, and to export stock

thither to the value of £5,000, to be placed there under his personal superintendence; and that this application was not granted by the government at Sydney, because the land in question was beyond the limits of that territory, and the occupations of Western Port had been altogether abandoned.

Batman, in his letter to governor Arthur, stated, that he confidently trusted the British government would duly appreciate the treaty he had entered into with the aborigines—would not, in any manner, molest the arrangements he had made, and that he should receive the support and encouragement, not only of the local government, but also that of his Majesty's ministers, in carrying the objects into effect. Finally, he described the country in the following terms:—

"I traversed the country, in opposite directions, about fifty miles, and having had much experience in lands and grazing in New South Wales and in this colony, I have no hesitation in asserting, that the general character of the country is decidedly superior to any which I have ever seen. It is interspersed with fine rivers and creeks, and the downs were extended, on every side, as far as the eye could reach, thickly covered with grass of the finest description, and containing an almost indescribable extent of fine land, fit for any purposes."

Governor Arthur, in a letter, dated Government-house, Van Diemen's Land, 4th July, 1835, transmitted copies of Batman's letter and deeds of transfer with the natives to the secretary of state for the colonies, soliciting that he might be "made acquainted, at an early period, with the views which his Majesty's government entertained upon this very important subject." The governor added, that Mr. Batman was an enterprising settler, that he had acted with prudence as well as humanity in his intercourse with the aborigines, but that it was doubtful whether a migratory savage tribe, consisting of thirty or forty individuals, roving over an almost unlimited extent of country, could acquire such a property in the soil as to be able to confer upon the purchaser the right of possession which would be recognised in our courts of law. The governor further hinted to his Majesty's secretary of state, that the land had been taken possession of, for the crown, by colonel Collins, previous to the settlement of Van Diemen's Land, and subsequently by captain Wright, in 1826. He also stated, that the formation of a colony at Port Phillip would be highly advantageous to Van Diemen's Land; that a liberal grant of land would be a well-bestowed gift on Mr. Batman, but that he had informed the explorer

that, with regard to the confirmation of his treaty with the natives, he could not hold out the slightest prospect of its being favourably considered.

Lord Glenelg, then his Majesty's secretary of state for the colonies, replied to governor Arthur's communication of 4th July, 1835, in a despatch, dated Downing Street, 23rd January, 1836. His lordship therein stated, that he would not then enter into the question of the right possessed by the chiefs who were the contracting parties to the territory of which they agreed to dispose, or of the justice and fairness of the arrangement, but would simply advert to the practical question at issue, namely, the expediency of confirming the grant to an association. All schemes for making settlements by private individuals or companies in the unlocated districts of Australia, had of late years been discouraged by his Majesty's government, as leading to fresh establishments, involving the mother country in an indefinite expense, and exposing both the natives and the new settlers to many dangers and calamities. His lordship added—"And there is so much of prudence and of justice, and, I think I may add, of humanity, in this policy, that I do not feel disposed to depart from it in the present instance. The conduct of Mr. Batman towards the natives has been such as to make me regret that I find it my duty not to advise his Majesty to sanction the proceedings of that gentleman and his associates."

Lord Glenelg concluded by saying, that the proposition of forming a settlement in the vicinity of Port Phillip, and of placing it under the jurisdiction of the supreme court of Van Diemen's Land, seemed open to some very serious objections; but it should receive every consideration. Meanwhile Batman, who appears to have anticipated a more favourable reply, proceeded to a minuter survey of the vast estates he considered himself to have purchased, and selected for his own residence the central position of Indented Head, situated about fifteen miles from the entrance to Port Phillip, and commanding a beautiful and extensive prospect. While these events were occurring, the six Launceston settlers, headed by Messrs. Jackson and Fawcner, had procured their vessel from Sydney, which they denominated the *Enterprise*. In this they embarked with their families and live stock, but a gale of wind drove

them back into the Tamar; they again set sail, and reached Western Port, but not considering the land inviting, the *Enterprise* proceeded to Port Phillip, which it reached on the 30th August, 1835. Batman viewed, with a jealous eye, these intruders on his broad domains, and warned them against encroaching on his territories. Threats of legal proceedings induced the Messrs. Jackson to move beyond the limits to which he laid claim, and they settled on a fine tract of pastoral land, situated upon the Salt Water river, (called the Arndell by Hume), about twenty miles above its junction with the waters of the Yarra Yarra river. Fawcner, however, disregarding the minatory proclamations of Batman, took up a position of great beauty and promise on the north bank of the Yarra Yarra, about eight miles by the course of the river, from its junction with the upper termination of the bay.*

The locality thus chosen must have been peculiarly attractive to a pastoral eye: the banks of the river sloped gently to a rising ground, covered with luxuriant grasses; and from the summit of the eminence on the northern bank, the waters of the bay of Port Phillip, distant two miles, were visible to the southward, over the tops of the trees of an intermediate flat. The country, in a northern direction, was of an undulating character, covered with grass and moderately wooded, and the Yarra Yarra rolled its deep and dark waters from the eastward, between banks that were occasionally lofty and picturesque, while the grassy downs were covered with the light-bounding kangaroo and the majestic emu, who enjoyed the fertile region until then undisturbed, save by a few wandering savages.

The Yarra Yarra, at the part where Fawcner fixed his camp, expanded its waters into a basin, well adapted for the reception of shipping. At the upper extremity of this natural dock, a ledge of rocks partially crossed the river, which occasioned a fall in the body of the water, and served to protect the freshness of the upper portion of the stream from the influx of the brackish or salt stream caused by the flood tide. The river pursued a circuitous course to the westward. A salt-water lake, or swamp, skirted its northern bank; and beyond appeared the beautiful valley of the Salt-water river, which united with the Yarra Yarra about four miles above its junction with the bay. In this favourable situation Fawcner com-

* Westgarth's *Australia Felix*.

menced ploughing the ground, and planting his corn and seeds, which in the ensuing harvest yielded him an ample reward. To add to his resources, Fawknor opened a "public-house." Batman, finding how formidable a rival he had to compete with, removed from the inconvenient locality he had previously chosen, at Indented Head, to a spot nearer the camp of Fawknor; and on a beautiful green he opened a general store, to supply the wants of the colonists, who now began rapidly to crowd to this land of promise. That the position of Fawknor was well selected, is evident from its being subsequently chosen by his Majesty's government for the site of the capital of the rising settlement; and the rude log dwellings of Fawknor and Batman are now overshadowed by the handsome buildings of the prosperous city of Melbourne.

To return to the chronological history of the settlement. The intelligence of the fine country round Port Phillip; the knowledge that numerous flocks and herds, belonging to Messrs. Henty and other settlers near Port Dalrymple, Van Diemen's Land, had been conveyed to the opposite coast at Cape Portland, in 1834, where they thrived well, and increased with great rapidity; a failure in the supply of pasture in the available districts of Van Diemen's Land; and the desire of some to remove from a settlement where bush-ranging convicts made life and property insecure,—these and other causes led to a Port Phillip fever; and many hastened with their flocks and families to the fertile shores from which glowing accounts were daily received at Launceston.

The governor of New South Wales, Sir Richard Bourke, deeming the Port Phillip country within the territories subject to his jurisdiction, issued, with the advice of his executive council, a proclamation, dated Sydney, 26th August, 1835, declaring that the lands in question were the property of the British crown; that all treaties, contracts, or bargains with the aboriginal natives for the purchase of said lands, were "void against the rights of the crown;" and that all persons found in the possession of such lands, without the licence or authority of his Majesty's government, would be considered and dealt with as trespassers. A copy of this proclamation was transmitted, by Sir R. Bourke, to his Majesty's secretary of state for the colonies, on the 10th October, 1835. In this able despatch, the governor pointed out the fallacy of endeavouring to

restrain the population of New South Wales from dispersion; that the very nature of their main pursuit—sheep-farming and depasturing cattle, compelled the colonists to send, yearly, large flocks beyond the existing boundaries of location, to preserve them in health throughout the year, otherwise the settlers must restrain the increase, or endeavour to raise artificial food for their stock. Whilst nature all around presented an unlimited supply of the most wholesome nutriment, either course would seem a perverse rejection of the bounty of Providence, and the latter would certainly require more labour than could be obtained in New South Wales, or than immigration could profitably supply. Sir R. Bourke frankly acknowledged that, independent of these powerful considerations, he was unable to comply with the desire of her Majesty's government at home, "to prevent dispersion." No adequate measures could be resorted to for the general and permanent removal of intruders from waste lands, without incurring probably a greater expense than would be sufficient to extend a large share of the control and protection of government over the country which it was found desirable to occupy. It was on these principles that Sir R. Bourke had, in his despatch of 4th July, 1834, to his Majesty's secretary of state, recommended the propriety of extending in a southern direction, to Twofold Bay, the limits within which, land might be acquired from the crown; but the Earl of Aberdeen, then his Majesty's secretary of state for the colonies, in a despatch, dated 25th December, 1834, did not agree with Sir R. Bourke: his lordship said—"His Majesty's government are not prepared to authorise a measure, the consequences of which would be to spread over a still further extent of territory a population which it was the object of the land regulations to concentrate." This intimation, evidently based on the theory which, in practical working, has been a chief cause of the distress, and fluctuation in the value of property in Australia, compelled Sir R. Bourke to check, as far as possible, the herd and sheep-owners turning "squatters," and naturally seeking for their expanding flocks fresh pastures. His excellency, therefore, could afford no encouragement to a Mr. James Atkinson, who proposed to form a settlement at Twofold Bay, by means of immigrants from the north of Ireland. But, on visiting Twofold Bay, Sir R. Bourke found the greater part

of the vast tract of fertile land lying between the country of St. Vincent and Twofold Bay, depastured by flocks and herds, attended by shepherds and stockmen, the pastures already contributing largely to the wealth of the colony of New South Wales, and exceeding, in importance, many of the districts where land was then (1834-5) disposable by sale or on lease. Many considerations rendered the governor unwilling to oppose the settlement of Twofold Bay in 1834, and now, in October, 1835, induced him to intimate to his Majesty's secretary of state, that "it would be more desirable to impose reasonable conditions on Mr. Batman and his associates, than to insist on their abandoning their undertaking." His excellency therefore proposed, in this despatch of 10th October, 1835, that a township be marked, both at Twofold Bay and in some eligible spot on the coast to which Mr. Batman's party had proceeded. The town allotments, and a portion of the adjoining territory, might then be declared open to location, according to the existing regulations; and purchasers of land would probably soon be found. Finally, his excellency remarked, that dispersion would go on notwithstanding discouragement, and would be accompanied by much evil that might be prevented by the guidance and control of authority opportunely introduced; and his Majesty's government ought not to delay taking some measure in assertion of the rights of the crown over these lands.

The conclusive reasoning of Sir R. Bourke seems to have produced an excellent effect on Lord Glenelg, then his Majesty's secretary of state for the colonies, who had also been addressed, on the 26th January, 1836, by Mr. George Mercer, of Edinburgh, as shareholder in and agent for the "Geelong and Dutigalla Association," who urged a crown grant of the territories purchased by Batman and Swanston, at Port Phillip, being conceded to them. Lord Glenelg, in a despatch to Sir R. Bourke, dated Downing-street, 13th April, 1836, admitted that there were physical impediments in Australia to the close concentration of the inhabitants (contemplated by the land regulations of 1831), with which it would be futile to contend by human laws, and that the principle of counteracting dispersion, when reduced to practice, must unavoidably be narrowed within the limits which the physical peculiarities of a colony dictate and require. New South Wales, he added, was marked

by nature for a pastoral country; the age of manufacturing industry was of course remote; and the quality of the soil inevitably separated the shepherds and herdsmen, and all their associates in labour, very widely from the general seat of government, and from each other. It was therefore wholly vain to expect that any positive laws, especially those of a very young and thinly peopled country, would be energetic enough to repress the spirit of adventure and speculation in which the unauthorised settlement at Port Phillip had originated. Lord Glenelg therefore expressed his general concurrence in the views entertained by Sir R. Bourke, and sanctioned his acting on them in the manner proposed. In concluding his despatch, Lord Glenelg, with his wonted candour, thus expressed the enlarged views, a consideration of which had influenced him in arriving at his present decision:—

"The motives which are urging mankind, especially in these days of general peace and increasing population, to break through the restraints which would forbid their settling themselves and their families in such situations, are too strong to be encountered with effect by ordinary means. To engage in such a struggle would be wholly irrational. All that remains for the government in such circumstances, is to assume the guidance and direction of enterprises, which, though it cannot prevent or retard, it may yet conduct to happy results. It may indeed admit of serious doubt, whether the settlers at Port Phillip and Twofold Bay have not, in reality, given birth to undertakings which deliberate reflection would have recommended rather than discouraged. Each of those places will probably, at a time more or less distant, form the nucleus of a new and flourishing settlement, interchanging with the districts at present occupied in the vicinity of Sydney many articles of internal commerce, and contributing to expedite the general occupation, by the people of this kingdom or their descendants, of those vast territories in which our national wealth and industry have already, in the last half century, converted an unproductive waste into two great and flourishing provinces. In producing and multiplying such results as these, it has, I believe, always occurred, and is perhaps inevitable, that the sanguine ardour of private speculation should quicken and anticipate the more cautious movements of the government."

While the local and home governments were engaged in considering the fittest course to be pursued, a stream of colonists was pouring into Port Phillip, and several co-partneries or associations were formed. The Port Phillip Association merged into the *Derwent Company*; a *Clyde Company*, promoted chiefly by captain Wood, occupied the fine pastures around the site of the present town of Geelong; about the middle of 1836, one year after the first location, 35,000 sheep had arrived from Van Diemen's

Land and pastoral stations spread over the plains around the Salt Water river, the Weirribee, the Barwon, and the Leigh. The settlers being at a remote distance from each other, and occasionally in the vicinity of native tribes, had large bells at their stations for sounding an alarm when in want of aid.*

In June, 1836, Mr. Stewart, a magistrate, arrived at Port Phillip, as the representative of her Majesty's government: he had been despatched thither by Sir R. Bourke, from Sydney, with instructions to ascertain the capabilities of the place, and to proclaim the invalidity of all purchases of land from the aborigines without the previously obtained sanction of government. He found that 177 persons from Van Diemen's Land had already settled in the neighbourhood of the bay, and had brought with them live stock and other property to the amount of £110,000. At this period Messrs. Batman and Fawcner had come to a mutual understanding on their respective claims, and appointed a much-esteemed fellow-colonist (M. J. Simpson) as an umpire in all disputes.

The claims for the land purchased from the aborigines by Mr. Batman and of the Van Diemen's Land Association, with whom he co-operated, were submitted to the late Mr. Burge, Q.C., who had specially studied the subject of colonial law. The questions proposed, were:—(1.) Whether the grants obtained by the association were valid? (2.) Whether the right of the soil is, or is not, vested in the crown? (3.) Whether the crown could legally oust the Association from their possessions? Mr. Burge gave his opinion at considerable length: the substance of it was, that the grants obtained by the Association were not valid, and that as between Great Britain and its own subjects, as well as the subjects of foreign states, the right to the soil was vested in the crown, by virtue of prior discovery. Mr. Pemberton and Sir William Follett said they entirely concurred in the conclusions of Mr. Burge, as expressed in his

* Some settlers when landing sheep at Port Phillip, perceived a man of great size, differing from the aboriginal natives, but scarcely distinguishable as a European, seated under a tree, watching the shepherds with a listless gaze. When accosted, he seemed to be roused from his lethargy, and was observed to repeat slowly the words uttered, as if memory was seeking to bring back some long-forgotten ideas. He gradually acquired the power of expressing himself in English, when it was ascertained that he had originally been a private soldier, named Buckley, and had been transported for striking his superior officer; was in the fleet sent out to Port

“extremely able and elaborate opinion.” This terminated the existence of the Van Diemen's Land Association, and of other companies formed for the colonization and appropriation of the lands of Australia Felix. The members of these companies were, however, allowed, in consideration of their payments to the aborigines, a remission to the extent of £7,000, of the purchase-money of whatever lands they might choose to purchase in Australia Felix from the crown.

Mr. Gellibrand, a legal practitioner of repute, and attorney-general for Van Diemen's Land, was one of the principal supporters of Mr. Batman; he proceeded to Port Phillip, in 1837, to protect the rights of the Van Diemen's Land Association, but in an excursion of exploration from Geelong towards the sources of the Barwon river, this unfortunate gentleman, with a Mr. Hesse, perished. He is said to have been murdered near the mission settlement of Buntingdale, by the aborigines; in 1839 Mr. Hawdon was shewn an European skull of highly intellectual formation, which was supposed to have been that of Mr. Gellibrand. On the back of the skull were the marks of two blows apparently inflicted by a tomahawk.

The value of the newly occupied territory had hitherto been known to few besides the settlers themselves, and even they were acquainted with little beyond the immediate neighbourhood of that portion of which they had taken possession; but after the journey from Argyle county, in New South Wales, accomplished by Messrs. Hovell and Hume, in 1824-5, favourable reports of the country became more widely circulated; to the exertions, however, of Sir Thomas Mitchell, is due the credit of establishing the route and laying open this region to settlers. In 1836 the surveyor-general having (during a journey related in a previous chapter) traced the junction of the Lachlan with the Murrumbidgee, and of the Murrumbidgee with the Murray, returned homewards along the left

Phillip with Colonel Collins in 1803, and, thirty-three years previous, had effected his escape when Collins landed his prisoners. Buckley had lived among the natives, and had “entirely dismissed the outward characteristic of a civilized being;” he was extremely reserved and uncommunicative in his manners. Mr. Batman took care of the unfortunate man, governor Arthur granted him a pardon, and he was appointed a constable at the new city of Melbourne; but, on expressing a reluctance to remain in the scene of his savage life, he was transferred to Hobart Town. Mr. Logan took an active interest in protecting the reclaimed man.

or southern bank of the latter river to the confluence of the Goulburn, Hovel, or Bayunga. Sir Thomas then quitted the Murray, and in lat. 36° S., long. 144° E., struck off in a southwest direction, when he entered a country which he describes his expedition as having traversed in two directions with heavy carts, meeting no other obstruction than the softness of the soil, and in returning over flowery plains and green hills fanned by the breezes of early spring. "I named this region *Australia Felix*, the better to distinguish it from the parched deserts of the interior country, where we had wandered so unprofitably and so long."

The official reports of Sir Thomas Mitchell, confirming, as they did, the glowing accounts of the immigrants from Tasmania, increased the desire for locations at Port Phillip; large herds of cattle, and flocks of sheep were driven from the old settled districts of New South Wales, into the new region; and in April, 1837, on the arrival of Sir R. Bourke, the governor of New South Wales, to inspect the place, it was found to contain 150 horses, 2,500 horned cattle, 140,000 sheep, and 450 colonists. The town (now city) of Melbourne was laid out in the form of a parallelogram, one mile in length, by three quarters of a mile in breadth, along the banks of the Yarra Yarra river. The first land sale took place in June, 1837; as the government required gold in payment for the land, and there were but few possessed of the precious metal, the lots were then sold at from £30 to £100 per half acre. The value of these town sections rapidly increased; at a sale by auction, in 1839, three half-acre sections realised the enormous sum of £10,250—and the purchaser made money by his bargain, as he cut up the sections into several small lots, to meet the great demand for building applotments. Speculation was carried to a great height. Up to the end of 1841, government sold, chiefly by public auction, 205,748 acres of land, and realised for it no less than £394,353. In 1837, the sales of town allotments in Port Phillip district, amounted to £7,245; in 1838, to £8,746; in 1839, to £8,988; in 1840, to £79,168; in 1841, to £4,028; total, £108,177. Of these sums, £4,576 were for town lots in Geelong, £11,026 for ditto in Portland, £7,638 for ditto in Williamstown, and the remainder for Melbourne. The country and suburban lands in the Port Phillip dis-

trict, previous to the introduction of the uniform price system, from 12th September, 1838, to 15th October, 1840, amounted to £231,526, viz.—in 1838, £25,286; in 1839, £60,964; in 1840, to October, £145,272. In 1839 sheep sold at £3 to £3 10s. each, cattle at £12 to £15, and ordinary saddle horses for upwards of £100 each. Flour rose to £80 and even £100 per ton of 2,000 lbs. weight, the common four lb. loaf was sold for 3s. 6d.* Ten shillings a day was no unusual remuneration for the ordinary descriptions of labour, and cottages of four rooms, with very moderate pretensions to appearance or accommodation, were let at an annual rent of £150 to £200. Vessels hastened to "*Australia Felix*" from every quarter of the globe, and at the port of Melbourne, less than three years after the foundation of the colony, 130 vessels were seen at anchor in one day.

It was about this period, I believe, that Sir G. Gipps, then governor of New South Wales, informed her Majesty's government that the road to Melbourne might be tracked for miles by champagne bottles; and there is a story of two bullock-drivers who, at a country "public house," on their way to Melbourne, called for a dozen of champagne, emptied the bottles into a bucket, and then deliberately commenced drinking the frothing wine from tin panikins.

Such a state of things could not last; in 1841 the reaction commenced, increased in 1842, and in 1843, sheep which but four years previous had been bought at £3, were sold for 1s. 6d. Cattle fell from £12 to 12s. each, and other things in proportion. The insolvencies were all but universal. At Melbourne there were in 1842, 113; in 1843, 124; in 1844, 45. Total, 282. The colony sustained during this commercial crisis great destruction of property; it is now recovering. Port Phillip, or Victoria, at present contains a population of nearly 50,000, and its live stock in 1849 consisted of 17,000 horses; 400,000 horned cattle; 5,200,000 sheep; and about 6,000 swine.

In 1839, her Majesty's government created the Port Phillip district a dependency of New South Wales, and appointed Charles Joseph La Trobe, Esq., superintendent, or lieutenant-governor of the same, under the directions of the governor of New South Wales. The authority of the superintendent was generally exercised more in *surveillance* than command, for he stood in the same

* Westgarth's *Australia Felix*, p. 177.

relation to the governor of Sydney as the latter stands with respect to the secretary of state for the colonies. The supervision of the departments of the treasury, survey, customs, post office, sheriff, and clerk of the crown, were ordered to be exercised through the chief functionaries at Sydney; but the judicial, marine, police, and protectorate of aborigines, were independent of the authorities at Sydney. Separate statistics were ordered to be kept, as far as possible, of the Port Phillip district, and in the previous book on New South Wales, the returns of the two divisions of the province will be found combined or separate. The Port Phillip district was authorised to send six representatives to the Legislative Council at Sydney. As the population and wealth of Melbourne and the surrounding country increased, the colonists objected to the district continuing longer associated with New South Wales; they sought the control of their own local affairs, petitioned the home authorities for a separation from the Sydney district, sent home an active and intelligent gentleman (Mr. Cunningham) to represent their views to her Majesty's government, and finally refused to send representatives

to the Legislative Council at Sydney, alleging that they could not find independent and properly qualified persons to travel a distance of 600 miles, and reside at Sydney for six months in the year, in order to give attention to the affairs of the Port Phillip district. Desirous of marking the impossibility of continuing the existing state of things, the electors at Melbourne elected Earl Grey, her Majesty's secretary for the colonies, as their representative for the New South Wales Legislative Council. This does not appear to have been done from any feeling derogatory to the noble lord, but simply to show their inability to obtain any fitting representative on the spot. The secretary of state (see page 550) complied with the urgent request of the colonists of Port Phillip, and an order in council, as previously stated (page 554), decided on the erection of the Port Phillip district into a separate colony, to be called after our gracious sovereign *Victoria*, and to be ruled by a governor, aided by a Legislative Council, partly nominated by the crown, and partly elected by the colonists, the proportion being one-third nominees to two-thirds elected representatives. Such are the provisions of the bill now before Parliament.

CHAPTER II.

BOUNDARIES—AREA—PHYSICAL ASPECT—MOUNTAINS—RIVERS—LAKES—HARBOURS
—COUNTIES—TOWNS—GEOLOGY—MINERALOGY—SOIL AND CLIMATE.

THE north-east limits of Victoria are defined by a line bearing north-west from Cape Howe to one of the branches of the Murray river, which divides the province from Auckland county and Maneroo Plains, in New South Wales; the *northern* boundary is formed by the Murray river to the frontier of South Australia, in the meridian of 141° E.; the *western* by a line bearing south to the Pacific Ocean, along the South Australian frontier; and the *southern* by Bass's strait, which separates Van Diemen's island or Tasmania from Australia. The length of the province from east to west is about 500 miles, the breadth from north to south about 250 miles, the coast line about 600 miles, and the area about 80,000 square miles

= 51,200,000 acres, it is therefore about equal in size to Great Britain.

PHYSICAL ASPECT.—The province throughout its whole extent presents great diversity of feature, from the lofty alpine region on the east, to the low grassy plains in which it terminates on the west; while its coast line, indented in some parts by picturesque bays and capacious havens, is in others monotonous in the extreme, a long tract extending between Cape Howe and Lake King, called by the colonists the "Ninety Mile Beach," being almost unbroken by inlet or cove. But the peculiar characteristic of Victoria is the large proportion of fertile, accessible, and comparatively level ground comprised within its limits, not-

withstanding the mountain chains and ridges of various extent and considerable elevation by which it is traversed. The whole territory is, generally speaking, well watered. The Murray, which rises in the Australian Alps, receives in its course various other rivers which flow over extensive plains in directions nearly parallel to its own, and thus irrigate and fertilize a great extent of rich land.

Hills of moderate elevation occupy the central country, being thinly or partially wooded and covered with the richest pasturage. The lower country, both on the northern and southern skirts of these hills, is chiefly open; and on the south undulates slightly towards the coast. The grassy plains which extend northward from these thinly wooded hills to the banks of the Murray, are chequered by the channels of many streams falling from them, and by the more permanent and extensive waters of deep lagoons, which are numerous on the face of these plains, "as if," says Sir Thomas Mitchell, "intended by a bounteous providence to correct the deficiencies of a climate otherwise too dry for an industrious and increasing people, by preserving in these abundant reservoirs the surplus waters of the large river; and indeed a finer country for cattle stations than this can scarcely be imagined."

In the western portion small rivers radiate from the Grampians, an elevated and isolated mass, presenting no impediment to a free communication through the fine country around its base. Hence the enormous labour necessary in order to obtain access to some parts, and for crossing continuous ranges to reach others, by passes like those so essential to the prosperity of New South Wales, may be in great measure dispensed with in Victoria. Towards the sea-coast on the south, and adjacent to the open downs between the Grampians and Port Phillip, there is a low tract of very rich black soil, apparently the best imaginable for the cultivation of grain in such a climate.*

MOUNTAINS.—The principal chain of mountains in Victoria, designated by Mitchell the *Australian Alps*, but known also as the great Warragong chain, or Snowy mountains, are a continuation of the dividing range (see p. 433) whose progress as far as Mount Kosciusko has already been delineated. Commencing from that point, and continuing the description on the au-

thority of Count Strzelecki, we find the chain resuming a south-west direction, and still maintaining a bold though less elevated outline. Its intricate branchings on either side, with their peaked summits, render the country rugged and sterile, excepting the neighbourhood of Lake Omeo, and a part of the Mitta Mitta valley, lying between the spur crowned by Mount Yabbara, and that surmounted by Mount Ajuk, a tract resembling a vast basin, without trees, and scantily supplied with water, but covered, even during a parching summer, with luxurious pasture. The whole region westward of the chain, towards Western Port, is rent by narrow gullies, rendered well-nigh inaccessible, either by the steepness of the ridges by which they are flanked or the thickly interwoven underwood. Eastward of the chain, in the direction of Corner Inlet, the country presents very different features. In 37° S. lat., or about the sources of the river Thomson, the spurs are less ramified, and of considerable height and length, shaping the intermediate ground into beautiful slopes and valleys, which ultimately resolve into an open and well-watered plain, clothed with nutritious grasses, adorned with fine timber, and offering charming sites for farms or country residences. The spur which bounds the southern limit of that area, and another, which, on the western side of the chain, studs the territory of Australia Felix, and the neighbouring district of Western Port, with some remarkable eminences, again change the face of the country, and constitute a broken inhospitable region, frequently unsupplied with water, and almost always ill furnished with either quadrupeds or birds.

In the vicinity of *Coroner Inlet* (Gipp's Land), the chain of mountains dips under a low and marshy ground, above which its crest appears rising only at intervals. Ten miles beyond, it is seen again, erect, jutting out boldly into the sea, and exposing its granitic flanks for a length of thirty miles to the lash of the infuriated surf.

At *Wilson's Promontory*, the sea interferes with the visible continuity of the range, but does not terminate its course, which in clear weather may be traced from the headland by the chain of islands in Bass's Straits. These islands, whether high and crowned with peaks, or low and crested only by the white sparkling foam of the sea, appear, in their winding and lengthened array, like the glittering snow-capped domes of the

* Mitchell's *Expeditions into Australia*

Andes, when seen above the dense clouds which encompass their lower region.* The Australian Alps cover an area of about 7,000 square miles.

The *Grampians* form the leading features of the country westward of Port Phillip—they are a lofty and extensive mass comprising three ranges, and covering a surface which extends latitudinally fifty-four miles, and longitudinally twenty miles. The extreme eastern and highest summit is Mount William, in height 4,500 feet above the sea. The most northern point is Mount Zero, in $36^{\circ} 52' 3''$ S. lat. The most southern, Mount Sturgeon, in $37^{\circ} 38'$ S. lat., rises 1,070 feet above the level of the plain, from which it springs like a perpendicular rock from the midst of the ocean. The most northern and elevated range extends from *Mount William* to *Mount Zero*, and is steepest on the northern side. From this hill the two other ranges branch off to the south, the western being named by Mitchell the *Victoria range*, and the eastern the *Serra*, from its serrated outline. On the slopes of the northern range are some forests of fine timber, but, in general, the higher summits are bare and rocky. Mount Abrupt, the south-eastern extremity of the Grampians, is 1,700 feet in perpendicular height; it contains a crater of 446 feet in breadth, the average depth being eighty feet. Mitchell describes the prospect he beheld from the summit as a truly sublime scene, the whole of the mountains quite clear of clouds, the grand outline of the more distant masses blending with the sky, and forming a blue and purple background for the numerous peaks of the range on which he stood, and which consisted of sharp cones and perpendicular cliffs foreshortened, so as to form one feature only of the extensive landscape, but composing a crescent nearly thirty miles in extent; this range being but a branch from the more lofty masses of Mount William, which crowned the whole. The view includes a vast extent of open plains fringed with forests, and embellished with lakes. "Certainly," says Sir Thomas, with an enthusiasm very natural under the circumstances, "a land more favourable for colonization could not be found. Flocks might be turned out upon its hills, or the plough at once set agoing in the plains. No primeval forests require to be first rooted out here, although there was enough of wood for all purposes of utility, and adorning the

country just as much as eye could wish."† *Mount Arapiles* lies to the north-west of *Mount Zero*. This mass, the western extremity of which has somewhat the appearance of a ruined fortress, consists of a sandstone passing into quartz. It occupies an area of about two square miles, and may be easily recognised, both by its isolated position, and by its small companion, the *Mitre rock*, situated midway between it and the lake to the northward, named *Mitre lake*. The highest summit of *Mount Arapiles* is 726 feet above *Mitre lake*.

Thirty or forty miles to the eastward of the Grampians is a granitic range called the *Pyrenees*, thinly wooded with very lofty timber, and grassy to their summits; they terminate, to the southward, in *Mount Cole*.

About fifty miles to the eastward of the Pyrenees is a range called the *Bunninyong*, or *Brisbane range*, running north and south, and traversing nearly a degree of latitude.

The *Mount Macedon range* commences about thirty-five miles north-north-west of Melbourne. *Mount Macedon*, properly so called, is one of the principal mountains in the province, clothed with trees (chiefly black butt and blue gum eucalypti), measuring from six to eight feet in diameter to its very summit, about 3,000 feet high, which is spacious, easily accessible, even on horseback, and covered, towards the south, with the tree-fern, musk, and other plants found at the Illawarra, New South Wales. *Mounts Campbell* and *Byng* are two conspicuous eminences to the northward, which, with *Mount Macedon*, form the figure of a triangle—the latter being the apex, the former marking the extreme points of the base line to the north-east and north-west.

Mount Hope (considerably to the north of *Mount Byng*) belongs to a group of low granitic hills, of which it forms the western extremity. It is composed of immense blocks of granite, and obtained its name from Sir Thomas Mitchell, who after several months spent in traversing the dead levels of the interior, hoped from its summit to obtain an extensive view of the region between him and the coast. How much the prospect exceeded his highest expectations, may be readily conceived, for the fair and fertile region he then beheld, was that which he afterwards designated *Australia Felix*. *Pyramid hill*, about six miles from *Mount Hope*, rises about 300 feet above the plain, in the form of a tri-

* Strzelecki's *New South Wales*.

† *Expeditions into Australia*.

angular pyramid, and being quite isolated, closely resembles the monuments of Egypt. Its apex is formed by a single block of granite. To the northward of Portland bay (in the county of Normanby) a range of inconsiderable extent and elevation, called the *Rifle Range*, is chiefly characterised by its lofty timber and numerous swamps. Along the coast, to the eastward of Cape Otway, is a range called the *Marrack hills*, of which comparatively little is known, from the impenetrable character of its luxuriant vegetation. *Station peak*, the highest point of the *Villemanata* range, is a well known landmark in the harbours of Port Phillip and Geelong. The mountain is accessible on every side, and is remarkable for its picturesque beauty.* Besides the chains above mentioned, there are *Strzelecki range* in Bass county, Western Port district, the *Mamaloid hills*, and other groups and detached mountains alluded to in the geological section. The prevailing line of the mountain ranges, when viewed at a distance, is a deep grey; on a nearer approach every variety of hue is agreeably blended.

RIVERS.—The streams which irrigate Victoria are generally deeper and more constant in their course, than those of the older colony, unless, indeed, we except the more recently discovered streams in the northern districts of New South Wales. The noble river which forms three parts of the eastern and northern boundaries of the province, is known as the *Hume* in the early part of its course, after receiving the waters of the *Ovens*, and the *Goulburn*, the *Campaspe*, the *Loddon*, and various smaller tributaries, it pursues a north-easterly course to its junction with the *Murrumbidgee*, from which point to its sea mouth, *Lake Alexandrina*, in South Australia, it is called the *Murray*.† The earlier portion of its course is that with which we are at present concerned, and to avoid the repetition of the two names—*Murray* or *Hume*—it may be well to speak of it, during this portion of its course, by the latter appellation only. The basins of the *Hume* lie in the deepest recesses of the Australian Alps, and its immediate tributaries having also their sources among the *Snowy mountains*, it is supplied

* Recent information concerning *Australia Felix*, by G. Arden, Esq.

† Several writers on Australia speak of this river by the name of the *Murray* only, and some confusion is certainly apt to arise in the minds of readers not intimately acquainted with the subject, from its bearing different names in different places, yet this does

from them with never-failing streams, and enabled to support a continuous volume, whose strength is manifested by its having forced a channel through a portion of the desert interior, instead of spreading over extensive plains, or being lost among morasses, like several other northern streams. I have, I believe, elsewhere quoted the remark of Sir Thomas Mitchell, that "each Australian river seems to have some peculiar character, sustained with remarkable uniformity throughout the whole course." That of the *Hume* appears to consist chiefly in the vast extent of alluvial margin, the lofty trees, and still lakes, which form its leading features throughout the varied scenery of the extensive regions which it fertilizes and adorns. It has been crossed, at different seasons and places, by Hovell, Hume, Sturt, Mitchell, Hawdon, and Strzelecki, and to the latter explorer we owe the knowledge of its sources. It is worthy of notice, that the *Hume* receives no tributaries from the westward or the northward. The first junction of any importance, is formed by the *Mitta Mitta River*, itself the recipient of *Tallargetta* and *Livingstone* creeks; some forty miles further, a small stream named the *Kewa* joins the main channel. About the same distance beyond, is a low granite hill named *Mount Ochtertyre*. Near this point Sir Thomas Mitchell describes the river as being bordered by so many lagoons, that he succeeded in obtaining a view of it only with great difficulty, and after nearly an hour's ride. He found it, at length, running at the rate of two miles and-a-half an hour, and just beginning to overflow, while the opposite bank consisted of a reedy and impassable swamp.

Still, tracing the course of the *Hume* from its sources, we find it receiving the *Ovens*, another of the streams discovered during the memorable journey of Messrs. Hovell and Hume. The *Ovens* takes its rise in the mountainous district to the west of *Lake Omeo*; after its junction with the *River King*, it becomes an important stream, finely breaking up the dead levels of the surrounding plains. The next junction with the *Hume* is formed by a river of considerable magnitude, which has been unfortunate not seem a sufficient reason for setting aside the designation given to it by its earliest discoverer. To those who agree with Dr. Lang that the *Murray* is formed by the junction of the *Hume* and the *Murrumbidgee*, the distinction is a just and even a necessary one.

in receiving a variety of names. In the maps it appears generally marked as the *Goulburn*, but there being another stream of that name in New South Wales, it is styled by some the *Hovell*, while others prefer its native, and certainly more euphonious appellation of *Bayunga*. The river, however, by whatever name it may be designated, is a very fine stream. Rising among the mountains to the north-east of Western Port, after receiving *Broken River* and several smaller creeks, it joins the Hume in 143° E. long., 35° 19' S. lat. About 100 miles below this point, the high road between Sydney and Melbourne intersects the river, which during that distance has a medium breadth of from sixty to seventy yards, flowing through a fertile and populous district. The *Bayunga* is subject to high floods, which supply extensive lagoons much frequented by aquatic birds. Sir Thomas Mitchell, in recounting his expedition of 1836, describes it as having a breadth of sixty yards, with a firm bed and banks; its mean depth (near the Deegay ponds) being somewhat more than two fathoms, and its velocity about one mile and 240 yards an hour. The length of its course is, according to Lang, about 200 miles, but it is elsewhere stated at above 400 miles. The land, up to its sources, is occupied by squatters, but near its mouth it is less settled, the soil being considered of inferior quality.

The *Campaspe* falls into the Hume about four miles above the junction of the *Goulburn* or *Bayunga*. It rises near Mount Macedon, and is joined at an early period of its course by the *Barnard* or *Coliban*,* a stream remarkable for the bold character of its scenery, and the abrupt and steep ravines through which it flows, the left bank consisting of undulating hills and lofty rocks of granite, the right strangely contrasting with it, by the perfectly level summits of the adjacent hills, which give to the whole the appearance of having been, at one time, in a fluid state. Some of these table hills are separated by dry grassy vales of excellent soil. Further back, the rugged crests of a wooded range of a different formation, render the level character of this ancient lava or vesicular trap more obvious. The rocky channel of the *Barnard* forms in one part a very striking cataract, the waters having a perceptible descent of above sixty feet, but

they fall in reality more than double that height; in the lower part, however, the stream escapes unseen among large blocks of granite. The picturesque effect of the waterfall of Cobaw is attributable less to the body of water falling, or the loud noise, than to the bold character and harmonious grouping of the rocks over and amongst which it falls. The prevailing shades are light red and purple-grey, the rocks being finely interlaced with a small-leaved creeper of the brightest green; a dark-coloured moss relieves the vivid hues; while a brilliant iris, shining steadily amid the spray, blends into perfect harmony the lighter colour of the rocks, and the whiteness of the torrent rushing over them.†

Loddon River, called the *Yarra* by Mitchell, from the noble line of *Yarra* trees growing on the very brink of the stream, next joins the Hume, and waters in its course a large extent of fine country, between that river and the western side of the Mount Bunninyong range, where it has its origin. This stream has all the characteristics of a mountain torrent, being at some times (as when discovered, in 1836) of considerable importance, with an equal depth of about nine feet, and a current of nearly a mile and-a-half an hour, while at others it is little better than a rivulet. The next important junction with the Hume is formed by the *Murrumbidgee*, and has already been described in the account of the latter river (p. 444); and of the former, little more need here be said. Throughout that portion of its course which we have just traced, the Hume, or *Murray*, maintains the character of a deep and rapid stream, exceeding at some points 400 yards in breadth, and offering a valuable means of internal communication. According to Mitchell, it carries to the sea a body of fresh water sufficient to irrigate the whole country; which is in general so level, even to a great distance from the river banks, that the abundant waters might probably be turned into canals, for the purpose of supplying natural deficiencies of water at particular places, or of affording the means of transport across the wide plains. The numerous and extensive grassy flats which border the river are attended, however, with one great disadvantage—the banks being frequently so steep and yielding as to render the water inaccessible to cattle, who appear to shrink instinctively from the muddy margin.

* According to Mr. Ham's map of Australia Felix (1849), the *Barnard* or *Coliban* joins a channel by which the *Loddon* and *Campaspe* anastomose

† See Mitchell's *Expeditions into Australia*.

The *Yarra Yarra*, though in itself secondary in importance to several other rivers of Victoria, all of which are, however, very inferior to the noble stream whose course through this province we have just examined, nevertheless claims attention, since on its banks stands the fair city of Melbourne. The *Yarra Yarra* rises in a gully between the Snowy mountains and one of the Goulburn mountains, about 100 miles east-north-east, as the crow flies, from Port Phillip, in $37^{\circ} 46' \text{ S. lat.}, 146^{\circ} 17' 30'' \text{ E. long.}$ The originating spring is so small that it could run through a four-inch pipe; it is, however, soon fed by branch streams, some of considerable magnitude, from the adjacent gullies. There are several waterfalls at the head of the stream, one rising some hundred feet above the bed of the river. The country is of trap-rock formation; freestone and slate are to be found. In various places the scenery (as described by Mr. Hoddle, who explored it in 1844) is extremely picturesque. Towards the source of the *Yarra Yarra*, the surface was boggy, and the scrub so close that the explorers could only cut their way through it at the rate of half a mile a day. Farther down, the soil was good, but very heavily timbered, many of the white gum-trees measuring fifty feet in circumference, and 150 feet in height; the tree-ferns were more than twenty feet high; and the *sassafras* and *myrtle* grew luxuriantly. The "greenest of trees" occasionally varied the scene; box, stringy bark, sometimes iron bark, black and silver wattle, and honeysuckle, studded portions of the country. One very pretty shrub abounded; it had smooth leaves, and produced, in bunches, a seed resembling black pepper in appearance and taste. Two other trees were also noticed, the fruit of which might be mistaken for the coffee-berry and plum. No aborigines were met with in the course of the expedition, which occupied nearly four months. This river disembogues in Hobson's bay, the northern extremity of Port Phillip; it is navigable up to Melbourne for steam-boats and other vessels of light draught, by a tortuous course of seven miles. The bar at its mouth has nine feet water at high tide. At the distance of four miles from Melbourne in a direct line, although perhaps three times that distance by the windings of the river, the *Yarra Yarra* receives, as a tributary from the northward, the *Merri creek*; at four or five miles farther, it receives the *Darebin creek*; and

at six beyond the latter stream, the *River Plenty*. These are all mountain torrents, rising in Mount Macedon range. There is much good land on their banks, although in general pretty heavily wooded and thickly covered with rocks, which are all evidently of volcanic origin, and have been carried down by the torrents from the extinct volcanoes of that part of the territory. The soil is a rich black mould, well adapted for the growth of the vine and other descriptions of European fruit-trees. There are many small farms, in this part of the country, in a highly creditable state of cultivation; and the situation of some of the villas, both on the main river and on its tributary streams or creeks, is romantic and beautiful in the highest degree.*

A very interesting account of the lower course of this river is given in an official document written by his Honour C. J. La Trobe, the Superintendent of Port Phillip. The source of the river had not then been ascertained, although the Superintendent rightly surmised that it would be found "among the offsets of the Snowy Alps to the eastward." Up to the furthest point to which it had then been surveyed it presents pretty much the uniform character of a constantly flowing stream, from a chain-and-a-half to two chains in breadth, and eight or ten feet in depth, sunk in ordinary seasons beneath abrupt and wooded banks. As it approaches the vicinity of Melbourne and its estuary, it is traversed by dykes of trap or ironstone, the most elevated and striking of which occurs at the head of the basin at Melbourne. At this point, in ordinary times of the tide, the fresh water mingles with that of the bay, which, following the lower bends of the river, is nine miles distant. In dry seasons, before the dam was built, the high tide would frequently pass this natural barrier, and flow strongly up the channel, its influence being felt for hours to the distance of perhaps a mile above the town.

Below the point where the river *Plenty* enters the *Yarra Yarra*, the high banks of the latter are found to border occasional flats, or low undulating tracts of various extent, composed of very rich alluvial soil; in the other portions of its course from the above point, the river will be seen to be confined within its deep bed at the foot of steep sandstone hills, or somewhat elevated flats of honeycomb land, sprinkled with trap boulders. The valley

* Lang's *Phillip's Land*.

of the Yarra Yarra, properly so called, may be said to terminate at Melbourne. At this point the bluff land retires on either hand and gives place to a wide tract of country, composed partly of low marsh, but very slightly raised above the level of the high tides, and partly of low undulating sandy rises, through which the Yarra Yarra and Salt-Water river take their course to their junction with the ocean. From the whole of this level the sea has doubtless retired, leaving the original coast line exceedingly well defined in the steep scarped banks which bound the low land for many miles.

The Yarra Yarra is subject to occasional heavy floods, which have occurred at every season of the year, in the height of summer and the depth of winter, as well as in the spring. That of 1844 was a very serious one. The river had been swollen by the usual equinoctial rains above its ordinary height, for some days previous to the night of the 2nd October, but it then rose for a few hours with a rapidity so unexpected, and with such short warning, that even after the flood had gained the opening below the hills, and consequently found room for its extension, the water rose so high, and poured down towards the bay with great rapidity, and in such a volume, that it was with difficulty that the people inhabiting the river banks a mile below the basin could be withdrawn from danger. Up the river, above and below Heidelberg (a village about seven miles from Melbourne), where there are many rich alluvial flats, the stream appears to have overflowed its high banks and covered the low cultivated ground on every side to the depth of ten, fifteen, or even twenty feet. In parts where it was shut in by the hills on either side, it flowed on with great velocity with a mean height of thirty feet and upwards above the ordinary level; and reaching the more open country in the vicinity of and below the town rose in the bed of the river to seven or eight feet above the usual level, and in the course of a few hours covered the whole of the lower ground to the foot of the bluffs in every direction to a mean depth of two or three feet. A simultaneous rise in the tides, caused mainly by the strong southerly gales, converted the whole of the lower country, from Melbourne to the *Salt-Water River*, into a wide lake.

The *Marriburnong*, or *Salt-Water River*, has its sources in the mountains south of Mount Macedon; it is fed by *Deep creek*

and others, and joins the Yarra Yarra four miles above its embouchure in Hobson's Bay.

Barwon river, on whose northern bank the town of Geelong is built, rises in the high barren ranges near Cape Otway; waters, in its circuitous course of upwards of 100 miles, a splendid tract of country, and empties itself into the ocean by Lake Conewarre, a few miles to the westward of the entrance of Port Phillip. The mouth of the Barwon is only navigable for boats entering in very fine weather. The Barwon, near the foot of some low hills called by the natives Barabool, falls some height over a rocky shelf, forming a pretty waterfall, and at a little distance may be found meandering silently between grassy flats. A few miles to the south-east of Barabool hills the river communicates with a large lagoon; "after which," says Captain Stokes, "I was informed there was only a depth of three feet, and a width of one-eighth of a mile. The Barwon is therefore not available for water carriage to the town of Geelong, even if its entrance were better protected."

Moorabool River rises in the Boninyong or Brisbane range, and joins the Barwon at Geelong. There is much good land on the Moorabool, both towards its source and towards its mouth. The declivities of the valley of this river, as also the singular sloping treeless sides of the Barabool hills, are described as appearing to have just emerged from the sea, which had, as it were, scooped out their hollows and smoothed their sides.*

Native creek also joins the Barwon from the northward, with which another more important junction is soon after made on the same bank by the *River Leigh*. This stream rises to the north of Mount Boninyong, and divides the county of Grant from the Portland Bay district.

Glenelg River issues from a gorge on the western slope of the northern Grampians, and pursues a due westerly course for about fifty miles, to within twenty-five miles of the western limit of the province. It then takes a southerly bend, entering the territory of South Australia a few miles from the ocean, but, quickly recrossing the boundary line, disembogues a mile or two to the eastward of it in the deepest part of Discovery bay, 38° 2' 58" S. lat., 141° 2' 9" E. long. Mr. Tyers states that the mouth of the Glenelg cannot be made available as a harbour; for independently of the heavy breakers on the bar, the accumulation of sand is sometimes

* *Discoveries in Australia*, by Captain Stokes, R.N.

so great between the eastern and western shores of the entrance as completely to separate the river from the sea; and moreover the basin, through which it flows immediately before its entrance into the ocean, has a depth of not more than two or three feet water. Beyond the basin the river appears to be of considerable depth, but the banks are chiefly limestone cliffs, for the most part about 100 or 200 feet high, and steep; the water is brackish for several miles, and the land indifferent, being a mere sand, covered with thick scrub, vines, and forest.* Higher up on the Glenelg, the country is of a very different description. Sir Thomas Mitchell, who came upon this river at an earlier portion of its course, speaks in the highest terms of the "beauty and substantial value" of the adjacent country. "It seems," he says, "that the land was everywhere alike good, alike beautiful; all parts were verdant, whether on the finely varied hills, or in the equally romantic vales, which seemed to open in endless succession on both banks of the river." In $37^{\circ} 30' S.$ lat. the Glenelg receives the *Wando*, a tributary from the eastward; farther south, in about $37^{\circ} 40' S.$ lat., it is joined by the *Wannon*. This latter stream rises on the eastern slope of the Grampians, then winding round the southern extremity of the mountain range, strikes off towards the fine country on the westward, and after receiving several tributaries from the southern and western Grampians, is joined by the *Grange Burn*, forty miles to the westward and at length, about twenty miles farther west, falls into the Glenelg some forty miles inland from the mouth of the latter river. Between the junction of the Wannon and the sea, two small streams, named the *Crawford* and the *Stokes*, flow into the Glenelg from the eastward.

Leaving the Glenelg, we may in noticing the chief streams of Victoria (not already mentioned), which have their embouché in the ocean, trace also the leading features of the coast-line proceeding in an easterly direction to Cape Howe.

Discovery Bay is a long open indentation of the coast, and affords no shelter to shipping beyond that of a mere roadstead. Cape Bridgewater, its eastern extremity, is a hummocky cliffy-faced point of land, separated from the main by a low neck.

* Report of an Expedition to ascertain the position of the 141st degree of east longitude, &c. By C. J. Tyers, surveyor. Colonial Government paper. Sydney: 1841.

Four miles to the north of this point are some caves from forty to fifty feet high, and of the same depth; the ceilings were encrusted with stalactites, and the entrances overlooked some pretty fresh-water lakes, three miles in extent, separated from the sea by a narrow chain of sand hills. *Cape Nelson*, the southernmost point of the promontory, which shelters Portland bay on the eastward, is in $38^{\circ} 24' 15'' S.$ lat., and $141^{\circ} 34' 15'' E.$ long.

Portland Bay extends twenty-six miles from east to west, and ten from north to south. The most northern portion of its shore is comparatively low, but the western portion consists of bold cliffs rising to the height of 180 feet. There is excellent holding ground (mud with a coating of sand) in from four to seven fathoms, towards the western shore, where the anchorage is completely sheltered from the south-westerly winds, but exposed however to those from the south-east, which prevail during the summer months. Two small rocky islets, called *Lawrence Isles*, lie off the point forming the south side of the bay, and a much larger one named *Lady Julia Percy's Isle* (known among the whalers as Julian Island) lies off its eastern shore.

The rivers which fall into Portland bay are—the *Surry*, which disembogues in $38^{\circ} 15' 43'' S.$ lat., and about $141^{\circ} 56'' E.$ long.; the *Fitzroy*, a more important stream, with much good land on its banks; and the *Shaw* and *Eumerella*, which unite immediately above their junction with the ocean. The channels of both these streams are merged, for a time, in extensive swamps.

Moyn River next falls into the sea at *Port Fairy*, a small and not very secure harbour ($38^{\circ} 22' S.$ lat., $142^{\circ} 16' E.$ long.), chiefly valued as a whaling station. The entrance is open, and affords but insufficient shelter for the anchorage; during the winter, however, which is the calving season of the whales, the prevailing winds come off the land. The town of Belfast is built on the shore of this bay, at the mouth of the Moyn.

Lady or Merri Bay, about twenty miles east of Port Fairy, is mentioned by Dr. Lang as a small but superior harbour, but other writers appear to consider it merely an open roadstead. It receives the *Merri* and *Hopkins rivers*; the former of these is a small and unimportant stream; the latter rises near Mount Cole, in a range sometimes called by the same name as the river, on the south-western face of the Australian Pyrenees, thence it pursues a southerly

course of at least ninety miles, and falls into the sea at the town of Warnambool. Both banks of the Hopkins* are occupied by squatters the whole way down, the country being of excellent quality. The land, towards the upper part of its course, is best adapted for pastoral, and that on the lower portion, for agricultural pursuits. The Hopkins receives several tributaries. About ten miles from the coast, *Taylor's River*, or the *Caranbalac*, falls into it over a precipice of forty feet.

The coast line between Lady or Merri bay and *Moonlight head* is little known, and its weather-beaten shores are deemed dangerous and impracticable. On the latter point the erection of a light-house is in contemplation, as also on *Cape Otway*, the southern extremity of the curved coast-line extending between the mouths of the Hopkins and the Barwon, which are 100 miles apart, or 150, following the coast-line. Mr. Smythe, who surveyed the shore for a distance of about seventy miles, namely, from fifteen miles west of Cape Otway, and fifty-five miles east of that cape, describes it as bold, —skirted by perpendicular cliffs of 500 to 1000 feet elevation above the sea, and having numerous bays, which afford excellent anchorage, and are well protected from all but due easterly winds.

King's Island, thirty-four miles from Cape Otway, forms the southern side of the western entrance to Bass Strait. The *Harbinger reef* runs about four or five miles off the northern extremity of the island; and the channel between that reef and Cape Otway is twenty-nine miles wide, with soundings of fine white sand. It is, therefore, a perfectly safe ship-channel; I beat through it in a large vessel during the night. There are soundings along the whole south coast of Australia, at a considerable distance from

the land, and the current sets to the southward.

Port Phillip was discovered by Lieutenant Murray, R.N., when commanding the *Lady Nelson*, New South Wales colonial brig, in January, 1802, and was shortly after visited and surveyed by Captain Flinders, in his Majesty's ship *Investigator*. The entrance is scarcely two miles in width, but within, the port expands into a capacious haven. The heads are forty miles from the innermost anchorage, off Melbourne, situated at the north side of the bay, which has a breadth varying from twenty to sixty miles, and includes an area of not less than 875 square miles of water, capable of holding in perfect safety the largest fleet of ships that ever went to sea. The entrance is narrowed by rocks lying off *Point Nepean* (in 38° 18' S. lat., 144° 30' 30" E. long.), and by shoals on the opposite headland. It is, however, deep enough to admit vessels of any size at low water, and may be safely entered at flood tide, which rises six feet. Masters unacquainted with the harbour, should not attempt to enter at night or at ebb tide. There are numerous sand-banks about the middle of the harbour, which break the force of the sea when the wind is from the south, and afford a smooth anchorage near Melbourne; the eastern passage to which, along the bay, is the deepest and safest. On the western side of Port Phillip, a branch or arm extends into the land in a west-south-west direction for about fifteen miles, and has an entrance of about six miles wide; it is called *Geelong harbour*. A small basin at its upper end communicates with the larger one by a narrow navigable channel. Geelong harbour runs nearly east and west, and there is secure anchorage at its furthest extremity.†

* The desire of offering a tribute of esteem to an old brother officer, appears in this instance to have completely triumphed over the love of appropriate names and sweet sounds, usually manifested by Sir Thomas Mitchell in the numerous instances in which the task has devolved upon him of finding designations for hill and valley, mountain and stream. Judging from his general rule, we may fairly infer that could he have ascertained the native name, he would have gladly retained it, and saved this fine stream from a patronymic which, but for the associations connected with it, would most assuredly sound in the ears of Sir Thomas himself common-place and distasteful in the extreme.

† Port Phillip is now visited by vessels from India, China, and other places, where instructions for the guidance of mariners may not be readily obtainable.

One vessel from Hong-Kong was recently lost at the rather difficult entrance of this immense harbour. Commanders of ships having on board this work on the *British Colonies* would expect to find sailing directions for entering new havens, I therefore subjoin an abstract of the *Directions for Entering Port Phillip*, as laid down by Captain W. Hobson, R.N., of H.M.S. *Rattlesnake*, who made a running survey of the port. Captain Hobson says that—

"In approaching Port Phillip from the westward, the entrance cannot be distinguished until Point Nepean bears N.N.E.; then you open Shortland Bluff, and obtain a view of the Estuary. But the position of the entrance is easily determined by its situation with respect to Mount Flinders to the westward, and Arthur's Seat to the eastward. Mount Flinders is a small flat topped hill at the extremity of

The principal features, on entering the bay of Port Phillip, are *Arthur's Seat*, *Station Peak* [*Youang*], and a bluff in the north-east, called *Dandonong*. *Youang* is one of a small cluster of lofty peaks, rising abruptly out of a low plain on the west side of the bay. *Arthur's Seat* forms the north extremity of a towering range, declining gradually, on the east shore, to the coast at Cape Shanck.

Of the rivers which fall into Port Phillip, the Yarra Yarra and the Salt Water river, the Barwon and the Moorabool, have been the low land; it makes like an island, and bears W. $\frac{1}{2}$ N. from Point Nepean. *Arthur's Seat* is the highest land on the coast westward of Western Port; from the southward its north-west extremity appears precipitous; it slopes to the south-east, and its summit bears E. $\frac{1}{2}$ S. from Point Nepean, which is situated on the eastern side of the entrance, at the extremity of a peninsula, which slopes gradually from the base of *Arthur's Seat*; at one-sixth of a mile N.W. by W. from the Point is a low rocky islet, connected with the shore by a reef, which dries at low water; even in calm weather the sea breaks on it with considerable violence. Point Lonsdale, on the western side, is a low point jutting out from a dark rocky cliff, from which a reef runs two cables' length to the eastward, and forms the southern extremity of a bay that terminates at Shortland Bluff to the northward. To enter Port Phillip a fair wind or a flood tide is indispensable; with a fair wind keep in mid channel between Point Nepean and Point Lonsdale, and steer in for Shortland Bluff until Point Nepean bears S.E. by S., then shape a course as hereafter directed for the channel through which you mean to pass; with a beating wind do not approach Point Lonsdale nearer than a quarter of a mile, and be careful to avoid a sunken rock which lies N.W. by W., two cables' length from the rocky islet off Point Nepean. The soundings across the entrance are very irregular, varying in one cast from seven to twenty-four fathoms, and again suddenly shoaling to five or six. On the edge of the reef of Point Lonsdale is a depth of five fathoms close to the rocks, and the same depth on the southern edge of the reef that extends from Point Nepean to the rocky islet. The tide in the entrance runs with considerable force in the height of the springs. From its impetuosity, and the irregularity of the bottom, a rippling is created which in rough weather would render it very unsafe for an undecked vessel to pass through, and presents to a stranger so much the appearance of breakers, that it requires good nerve to venture on. If the wind should be light, care must be taken to get into the fair way before you come too near the reefs, as the flood tide sets across them towards the entrance of the port, with great strength. As the entrance is only contracted by projecting points, with a favourable tide or a fair wind, you are soon within them, and then if you are desirous to anchor, a good berth may be found any where between Observatory Point and Point King, within half a mile of the shore, in seven fathoms, clay bottom.

"When bound through the Western Channel, take care to avoid a little shoal called the Pope's Eye, on which there is only twelve feet. The following marks will place you exactly on it. Swan Point N. 1° E.

described, and the Werribee and Little river alone remain to be noticed.

Werribee River is a small fresh-water stream, having its origin in the high range between Mounts Boninyong and Macedon, and its embouche midway between Melbourne and Geelong. In seasons of drought (such as the summers of 1845 and 1846), it is little more than a succession of deep pools, with scarcely a perceptible current; but in winter it becomes a large and rapid river, and has been known to rise twelve feet in a single hour. At an early portion of (mag.) Mount Eliza, summit on with north end of the flat island. If bound through the Western Channel, pass to the westward of Pope's Eye, by keeping Swan Point to the northward of N. $\frac{1}{2}$ E., until Shortland Bluff bears W. $\frac{1}{2}$ S., and steer for the entrance of the channel which lies between a shoal that commences two cables' length to the northward of Swan Point and the west bank, to clear the bank off Swan Point, keep Point Lonsdale just open with Shortland Bluff, until Swan Point bears N. $\frac{1}{2}$ W., the course then is N.N.E., and midchannel will be preserved by keeping Point Nepean a finger's breadth open with Swan Point; the soundings are from four fathoms at the centre, to a quarter less three at the sides, from which the banks shoal suddenly to five or six feet, and in some places dry at low water, when Station Peak is seen over the north red cliff, bearing N. 72° W., you are clear to the northward of the banks, and will be in seven fathoms water. In approaching from the northward, bring Point Nepean open with Swan Point before the north red bank bears N. 72° W., and follow the leading marks. This channel has now a buoy marking the entrance on the edge of Pope's Eye, two more on the edge of the shoals on either hand, and a fourth on the Swan Spit. In beating through, you must be guided by the eye on the eastern side when the shoals show themselves very distinctly, and take care not to shut the marks. In standing to the westward, at all times, it is advisable to keep a person aloft, whence the shoals may generally be distinguished. The tide runs from two to three knots per hour, and follows the direction of the channel. To pass through the south channel when fairly within the port, keep along the south shore, at a mile distance, in nine or ten fathoms water, until abreast of Point King, from which situation an E. by S. course, with very slight deviations, will carry you through. It is impossible to find any leading mark for a channel so long, and in some places so narrow, that is not more liable to perplex a stranger than to guide him. The only certain measures of navigating it, until regularly buoyed, is by the eye from aloft, and when the weather is too hazy to show the banks it is not safe to go through. The soundings in the south channel are very irregular, from sixteen fathoms to five, and close to the edge of the banks, from that to three, two, and one fathom. Although the deepest water is to be found in this channel, it is not to be preferred by vessels drawing less than sixteen feet water; the absence of any leading mark, and its great length, being a great objection. The harbour-master in a late government notice, has declared this passage to be impracticable, from the shifting of the sands. The south sand that commences near Point King, forms the south side of the channel, its eastern end

its course, about two miles from Ballan, the Werribee forms a wide deep basin, bounded on all sides by basaltic columns; and above this basin the stream flows over a basaltic pavement of somewhat the same character as the famous Giants' Causeway, in Ireland; but the blocks are less regularly formed.*

Little River rises to the north or north-west of a low range called the Anaki hills, and falls into Port Phillip a few miles to the southward of the Werribee. Near its sources there is some good land, but towards its mouth are extensive plains of ferruginous sandstone.

Port Phillip is divided from Western Port by a low promontory, of which the south-western extremity is *Cape Shanck*, a narrow projection of calcareous formation, immediately off which lies a rock named, from its striking resemblance, *Pulpit rock*.

Western Port, discovered by Mr. Bass, in 1798, and so named by him from its being the limit of his explorations to the westward, from Sydney, is a fine harbour, situated in a wide and deep inlet ($38^{\circ} 15' \text{ S. lat.}$,

bears S.W. $\frac{1}{2}$ S., (mag.), from the white cliff, and to the eastward of that, deep water extends close to the shore.

"The northern side of the channel is formed by the middle ground, the western end of which bears N. $\frac{1}{2}$ E. (mag.) from Point King, and extends seven miles eastward when Station Peak is on with Indented Head bearing N.W. by W. (mag.), and White Cliff S.W. by W. $\frac{1}{2}$ W., you are clear of the middle ground, and may steer to the northward. Symond's Channel may be made available in N. or N.W. winds, when unable to fetch through the western channel, but is not recommended for any but small vessels until it is buoyed. The Pinnacle Channel is only suitable for small vessels, the deepest water will be found close along the edge of the great sand. To pass clear of the shoals to the northward, keep Station Peak on with the extreme of Indented Head, and do not shoal the water under nine fathoms. From the edge of the bank over the area of Port Phillip, to within a mile of the shore, there is deep water every where, with the exception of the Prince George Bank off Indented Head, and in running and beating towards Hobson's Bay, at the northern extremity of the port, there is nothing to apprehend. Steer in for Point Gellibrand and pass it at two cables' length distance, taking care in so doing not to shoal the water under five fathoms, and to anchor when you bring Point Gellibrand to bear S.S.W. in four-and-a-half fathom water; small vessels may bring it to bear south in two fathoms. A light-house is now erected on this point, which will at night direct strangers to the anchorage, independent of the lights of the town and numerous shipping. If you are bound into Geelong harbour from sea, be careful to give a berth of at least two miles from Indented Head to avoid the Prince George Bank, which extends from it in a N.E. direction. In rounding the shoal on the east and north sides do not shoal the water under seven fathoms until Point Richard bears W. by S., you may then haul up for Point Henry.

$145^{\circ} 30' \text{ E. long.}$), containing two great bays, the inner one being a circular basin of about eighteen miles across, with an island, called *French Island*, of about twelve miles in length and six in breadth, in its centre, which thus divides it into an eastern and a western arm. Another island, called *Phillip* or *Grant Island*, of about fifteen miles in length, stretches across the outer bay, almost from point to point, and effectually shelters the harbour, leaving a wide and well-protected ship channel on its western side, whilst on the eastern the passage is narrow, and fit only for boats and small vessels.

This harbour† presents one very curious feature, namely, a sort of canal or gut in the mud flats that front the eastern side of Grant Island. Its depth varies from six to seven fathoms; the width is half-a-mile. The chief, if not the only danger to be guarded against in Port Western, appears to be a sandbank, lying in the centre of the channel, four miles within the entrance.

Phillip Island consists of an unvaried strata of vitrified sandstone and clay. The

"Do not approach the northern shore nearer than one mile, and in passing Point Wilson keep Point Henry to the westward of W. by S. (mag.); one mile east, or E. by S. from Point Henry, there is tolerable good anchorage. On the bar at the head of Geelong harbour you cannot ensure more than seven feet at high water; at a cable's length within the bar there are five fathoms, and the depth may be carried close up to the shore; the rise and fall of the tide does not exceed four feet in any part of the port, and more commonly it does not rise beyond two feet six inches on the springs: both the time of high water and the extent to which it rises are greatly influenced by the wind; the force of the tide through the channels leading to the north from the mouth may be estimated at from two to three miles per hour; in the south channel it runs with less force, and in the wide expanse northward of the banks it is scarcely perceptible. When it acquires its greatest strength it is not safe for any open boat to venture out, but it is easy to conceive the rapidity with which it must run to raise the level of 875 square miles of water four feet by means of so small an embouchure."

* *Phillip's Land*; by Dr. Lang.

† In proceeding from Port Western to Port Phillip very extraordinary soundings were ascertained by Captain Stokes, in H.M.S. *Beagle*. About one-third of the way across from Grant Island to Cape Shanck, seven miles from the latter, the depth was ascertained to be *seventy fathoms*, on a gravelly bottom. The same unusual depth was likewise found by a single cast of the lead, three miles south of Cape Wollam, with the same kind of gravelly bottom, or a very fine kind of shingle. In the latter instance, there were on either side thirty-nine and thirty-three fathoms fine sand and shells. This depth is the greatest within the strait.—(See *Voyage of H.M.S. Beagle*, by Captain Stokes.)

western half of its southern side is formed by a line of cliffs, from one to three hundred feet in height. A remarkable pyramidal rock marks the point where they terminate, after which a long range of low hills, covered with scrub, stretches to *Cape Wollami*, a helmet-shaped headland, rising abruptly from the sea to the height of 480 feet. This cape, situated at the south-eastern extremity of Phillip island, is a very conspicuous object, the rest of the island, with little exception, being covered with low hills, thickly clothed with the tea-tree, scrub, and vinous plants. On the northern side of the island are several small lagoons or waterholes, situated a little distance inland, which contain pure water. The anchorage from the signal-post to Elizabeth cove affords complete shelter from south and south-west gales. The soil of *French island* is of a superior description to that of Phillip island; and on its shore is found freestone resembling the celebrated Portland stone, which rises in large perpendicular masses. The water near those cliffs is of sufficient depth for vessels of any size to anchor alongside. The upper land has for its principal trees, stringy bark, gum, and "she oak." The lowlands are impassably covered with mangrove and tea-tree.

The mainland shores of both the inner and outer bays are very rugged, and are broken in many places by the channels of small streams; of which, however, only one, *Bass River*, has received a name; and in the useful and carefully compiled map of Australia Felix, published in 1849, by Mr. Ham, there is not even this exception.

Leaving Western Port, we follow the coast line in a south-easterly direction, to Cape Patterson, a low point covered with scattered sand hillocks, which marks the commencement of a deep bight, in the centre of which a tongue of land, somewhat similar in shape and direction to that constituting the southern boundary of Port Phillip, forms a bay, or rather lagoon, called *Anderson's Inlet*, of about fifteen miles in diameter, into which the *Tarwon River* flows from the north. The

* A rock called Crocodile rock, in $39^{\circ} 21' 30''$ S. lat., and $4^{\circ} 41' 45''$ west of Sydney, lies in a line midway between the western extremities of Rodondo and Curtis islands, nearly nine miles from each. It is a smooth round-topped granite boulder, just protruding above the surface, and in fine weather the sea runs over it without breaking. The depth being forty-three fathoms close to it, if the waters of the strait were drawn off, the shape of it would be that of a column nearly 260 feet high.—*Stokes' Discoveries in Australia.*

wild forest country, through which this stream takes its course, is hemmed in on the north, east, and west by the Strzelecki range and its branches,—the native name is *Tangel*, and there are said to be large open plains to the north-east, abounding with game.

Cape Liptrap, in $38^{\circ} 55'$ S. lat., $145^{\circ} 57'$ E. long., marks the southern extremity of the curve in which Anderson's inlet is situated, and the commencement of another equally striking. Cape Liptrap is twenty-four miles distant from *Wilson Promontory*, and the shore receding between these two points, forms a bay nine miles deep.

We now arrive at the majestic headland which forms the southern extremity of Australia. Wilson Promontory consists of a lofty mass of hard granite, twenty miles long by six to fourteen wide, its lofty summits rising to a height of 3,000 feet, are at most seasons of the year enveloped in a cloud of grey mist. Sometimes, however, the bold outline of the mountains is relieved against a clear sky, and their highest peaks catch the first rays of the morning sun as it rises from the southern ocean. The promontory is connected with the main land by a low sandy isthmus, which is described as bearing the appearance of having only recently been left dry. Several clusters of small islands, namely, the *Glennie*, *Cleft*, *Rodondo*,* and others, lie immediately off the west and south shore of the promontory; those known as the *Hogan* group, are situated to the south-east, the largest of them (in $39^{\circ} 13' 14''$ S. lat.) is about a mile-and-a-half in extent. Captain Stokes, who landed upon it in 1842, when surveying Bass Strait, found a number of dogs left by sealers, that had become quite wild, and some fur seals in a cave on the south-east point. On the north-east is a boat cove sheltered by two small islets, and provided with fresh water.

Cape Wellington, the eastern projection of Wilson Promontory, forms the north point of a wide and spacious bay, called by Captain Stokes, *Waterloo Bay*,† from H.M.S. *Beagle* having anchored there on the anni-

† The following extract, quoted by Dr. Lang, from the *Port Phillip Patriot* (the date of which the doctor does not state), evidently refers to the inlet described above, on the authority of Captain Stokes, as Waterloo bay. "Lady's bay is a small securely-sheltered cove, with a depth, in many places, of from seven to eight fathoms water, on the eastern side of Wilson promontory, about four or five miles from its extremity. It was named by Captain Wishart, who discovered it, after his vessel, the *Lady of the Lake*. Lady's bay is so free from dangers that the

versary of that victory. There is no good anchorage between it and the south end of the promontory, from which it is four miles distant. The depth in the centre of Waterloo bay is twelve fathoms, muddy bottom. At its head lies the low valley three miles in length, which stretches across the promontory and forms a very conspicuous break in the high land. On the northern side of it, the lofty and wooded crest of Mount Wilson rises abruptly. On the southern is a ridge strewn over with immense boulders of granite. A rivulet winding amid the valley below, falls into the sea at the north end of a sand beach, forming the head of Waterloo bay.

Refuge Cove, to the north of Waterloo bay, is so named from being the only place a vessel can find shelter in from the eastward, on this side of the promontory. This small cove, which is only a cable wide at its entrance, may be recognised by *Kersop Peak*, which rises over the south part, and from its lying between Cape Wellington and *Horn Point*, and also from its being the first sandy beach that opens north of the former. The scenery of Refuge Cove is said to resemble that of Tierra del Fuego; and Captain Stokes states, that the smooth quiet sand beaches, the dense forests reaching to the water's edge, the mist-capped hills, and the gusts that swept down the valleys and roared through the rigging, forcibly recalled to his recollection that land of storms.

On the north side of Refuge Cove is the *Sealers' Cove* of the old charts, a small deep bay, open to the east. The trees on the south-west side are large, measuring eight feet in diameter, affording shade and moisture to tree-ferns, and an undergrowth of various kinds, and supporting on their branches a profusion of creepers which, interlacing, form a canopy resembling lattice-work.

Corner Inlet, an extensive basin, situated in the deep angle between Wilson promontory and the main land, has a bar extending off it six miles from the entrance, on which there is water for vessels drawing from sixteen to eighteen feet. Captain Stokes speaks of it as a "great useless sheet of water, only mariner, in entering, might touch the rocks with his vessel's broadside, and still float in six fathoms water. The shores are rocky, exceedingly steep, and covered with dense impenetrable scrub; the rocks are principally of granite. Good water is to be obtained in this locality. The bay, too, has the usual character of unfrequented harbours on this coast, abounding with fish."

navigable a mile or two within the entrance, and that chiefly on the northern side, the rest being occupied by mud flats." A very different opinion was however expressed concerning this inlet by its discoverer, Captain Lewis, the harbour-master of Port Phillip, who states that he "never entered a finer harbour," and adds that on entering it, keeping the promontory close on board, there were not less than three fathoms between the reefs: no bottom was found at twenty fathoms, nor for a considerable distance up the harbour. A group of islets named from their utility *Direction Isles*, lie a few miles outside the bar. Close to the promontory, and about seven miles from the entrance of Corner inlet, is a small islet called *Rabbit Island*, from the numbers of these animals found there, the progeny of a pair turned loose by a sealer about ten years ago. Over the north shore of Corner inlet is a woody range, the summit of which, Mount Fatigue, is 2,110 feet high. A small stream called *Franklin River* falls into Corner inlet from the north, and thence to Port Albert the coast is intersected by numerous creeks.

Port Albert is situated about fifteen miles to the eastward of Corner inlet, in $38^{\circ} 44'$ S. lat., and $146^{\circ} 41'$ E. long. It is a valuable harbour, available for vessels of 200 tons. The entrance is said to be rather intricate and circuitous, but not dangerous to those at all acquainted with the channel. "It has this special advantage," says Dr. Lang, "that when it would be unsafe—as I suspect it would in a violent south-easterly gale—to attempt the channel, there is shelter for vessels close at hand, between Rabbit island and the mainland of Wilson promontory."

Albert River and *Tarra River* fall into this port. Both these streams originate in thickly timbered ranges, about twenty miles inland. On the banks of the latter river the rising town of Alberton, the embryo capital of Gipps' Land, is built. Several islands, of various forms and sizes, lie off Port Albert.

Vessels bound to Alberton usually pass through *Shallow Inlet*; but the water being so shallow as to break across the entrance, if there is any swell, it is considered more prudent to enter by Corner inlet, and take the second opening on the right within the entrance.

Tracing the coast line from Alberton, first in a south-east and then in a north-east direction, we find it presenting few remarkable features. Occasionally it is broken by

streams descending from the south-eastern flanks of the Snowy mountains, of which *Merriman's Creek* is one of the largest; but there is little to deserve especial notice until we arrive at a series of lakes or lagoons, connected with each other, and running parallel to the ocean, with which they communicate by a narrow and unfortunately, not navigable channel. The largest and most westerly of these, *Lake Wellington*, contains fresh water, and is about twenty miles long, by about ten broad. It is joined to *Lake King* by a central and narrow lake, assuming towards *Lake Wellington* the character of a river. *Lake Reeve*, situated between the central lake and the sea, has a length of about eighty miles, opening into *Lake King* at its eastern extremity. The depth of water in mid-channel is twenty feet, and in some places this depth is maintained right across from land to land; but in others there are shallows and banks on either side. Into these lakes various rivers, all of which take their rise in the south-eastern face of the Snowy mountains, or rather on the eastern side of the dividing range, disembogue,—*Latrobe River* and the *Dunlop* or *Avon* falling into *Lake Wellington*, *Providence Ponds* into the central lake, and the *M'Arthur* or *Mitchell*, the *Riley*, and the *Tambo* into *Lake King*. According to Dr. Lang, the *Latrobe* is navigable for thirty miles from its embouche, the *M'Arthur* for twenty, and the *Tambo* for ten; but they have each a bar, carrying seven feet water, at their mouths. The *Latrobe* is much the largest of the three, and forms the general receptacle of the streams that rise on the eastern side of the dividing range for nearly a hundred miles, as well as of those that rise on the northern side of the coast range. Its principal tributaries, among which are the *M'Alister* and the *Barney*, originate in lofty mountains, of which the highest peaks are covered with perpetual snow; and therefore, they are not mere torrents, but perennial streams.*

After leaving *Lake King*, the coast-line becomes exceedingly monotonous, and continues so during the long tract extending towards Cape Howe, called the *Ninety-mile beach*, which has, I believe, not yet been surveyed.

To the eastward of *Lake King* is *Lake Tyers*, an interior lagoon, twenty miles from which the coast is broken by the impetuous torrent carried to the ocean by

* *Phillip's Land*, by Dr. Lang.

the *Margalong* or *Snowy River*. This stream rises in the Australian Alps, traverses the western portion of Monaroo plains, then pursuing a southerly course, dashes along its rocky channel from precipice to precipice, forming in its rapid descent many splendid waterfalls.

Jenoa River falls into the ocean at an inlet, a few miles west of Cape Howe.

Gabo Island, on which it is proposed to erect a lighthouse, is situated about a quarter of a mile from the sandy spit of Cape Howe. This isle is a mile and-a-half long, by three-quarters of a mile in breadth; it has a basis of solid rock, with some grassy land, and springs of fresh water. The highest part is 158 feet above the level of the sea. On the north-west of the island is a bay named *Santa Barbara*, where vessels not exceeding 100 tons may find shelter from south-east and south-west gales. Tenders have been issued by government for the construction of a light, as recommended by Mr. Tyers, which would be very advantageous to the coasting trade, and to all vessels navigating the south-east coast of Australia.

We have now traced all the rivers of any importance which fall into the ocean, as we had previously done those which through different channels unite their waters with the *Murray* or *Hume*; a few streams, however, still remain unnoticed which flow inland, and pour their waters into interior lagoons, or (like some of the streams in the older province) spread themselves over extensive marshes.

Of these the most remarkable is *Wimmera River*, which originates near Mount Cole, in the Pyrenees, thence pursuing a shallow and tortuous course for about 200 miles, through a region of sand and heath, succeeded by jungle and *mallee* (*eucalyptus dumosa*) scrub, intermingled occasionally with open plains and tolerable pasturage, it disembogues in *Lake Hindmarsh*. (See *Lake Hindmarsh*, p. 596.)

The leading characteristic of the *Wimmera* is its long and beautiful reaches, which extend towards the north and west, and are so numerous that *Mitchell*, after fording the main channel in 36° 46' 30" S. lat., 142° 39' 25" E. long., crossed no less than five, within the distance of a mile-and-a-half.

Avoca River, like the *Wimmera*, rises near Mount Cole, divides the Western Port from the *Wimmera* district, and disembogues in *Lake Bael Bael*. (See *Lake Bael Bael*, p. 596.)

A small stream named *Avon River* flows between the Wimmera and Avoca, and falls into Lake Banyngong. *Woody Yaloah River* flows in a different direction to those just mentioned. It takes its rise near *Lake Barrambeet*, thence running a southerly course, it receives numerous tributaries, and falls into Lake Corangymite.

LAKES.—The numerous inland lakes of this province are among the most remarkable of its physical features. The waters of many of them are quite salt, much more so indeed than the waters of the ocean; and in summer, when the extensive evaporation that always takes place at that season leaves a large extent of the surface usually covered with water, and sometimes the whole bed of the lake quite dry, the salt is found in large crystals to the depth of three or four inches, and sometimes even of six, within the usual water-mark. It is of excellent quality, and is used for all domestic purposes by the squatters in this part of the territory, requiring only to be pounded when used for the table. (See Geology of Victoria.)

Lake Corangymite, (so called from the native word, *corang* or *coraing*, signifying bitter,) the largest, is situated in the Portland Bay district, between the counties of Hampden, Grenville, Heytesbury, and Polwarth. It lies about fifty miles due west of the town of Geelong. When first discovered, it was supposed, from its vast size, to be an arm of the sea, but was proved by Dr. Thomson to be a lake, apparently exceeding ninety miles in circumference. Its waters are perfectly salt, and towards the southward become very shallow. To the north the lake deepens to a degree which has not been ascertained. Lake Corangymite consists properly of two lakes, the smaller of which (called *Gnarput*) is situated at the north-western extremity of the larger—is of a circular shape, and does not appear to exceed eight or nine miles in circumference. The large lake is of a very irregular and serpentine form; and although the banks are generally rather bare of wood, it forms an attractive object in many fine views. This vast basin is supplied by numerous fresh-water streams, most of which, however, are in summer merely chains of ponds, their channels being, occasionally, quite dry. The *Woody Yaloah* enters the lake at its north-eastern extremity; the *Perring Yaloah* at its southern. These streams have been known to rise, in a single night, with such

rapidity, as to sweep away bullocks, drays, and even men, encamped incautiously on their banks.* There are many small lakes in the vicinity of Lake Corangymite, most of them containing salt water. *Lake Colac*, however, is among the exceptions, being a beautiful sheet of fresh water, measuring from seven to eight miles in length, by from two to three in breadth. *Lake Poorumbeet* is another fresh-water lake, in form nearly circular, and measuring about four miles in circumference. The banks are precipitous, except at two or three points, where they sink to the level of the adjacent country. The lake is much frequented by water-fowl. The water, which is of excellent quality, and of unknown depth, is supplied by springs underground. It has an outlet to the southward, where the water that escapes forms first a marsh, and afterwards a small creek or stream. Lakes Colac and Poorumbeet lie near the southern extremity of lake Corangymite, the former to the eastward, the latter to the westward.

Lakes Barrambeet and *Boloke*, or *Bolac*, are small fresh-water lakes, situated in the Portland Bay district. Lake Bolac is some three miles in length, by about the same breadth. At one point the water is salt, but elsewhere quite fresh. It is chiefly supplied by *Fiery Creek*, a small stream from the Pyrenes.

Modewarre Lake (fourteen miles to the south-west of Geelong) is of a circular form, very shallow, and about six miles in circumference. The banks are formed into regular terraces all round, as if the water had once stood at a much higher level than it usually does now. In the continued drought of 1845 and 1846, the basin was quite dry, which it had not been previously during the recollection of the settlers. Its character and origin appear to be similar to the numerous circular lakes discovered by Mitchell, about 150 miles to the westward, named by him *Greenhill Lake*, *Mitre Lake*, &c.

Lake Hindmarsh, in the Wimmera district, is a fresh-water lake, estimated at about thirty miles in circumference. It is entirely supplied by the Wimmera river, which enters it from the south, and has an outlet on the north, whence it pursues its course through a barren and uninhabited region, to a second lake, from which it emerges as from Lake Hindmarsh, and is finally lost in a third.

Lake Bael Bael, situated between the Wimmera district and the Western Port district,

* *Lang's Phillip's Land.*

receives one branch of the Avoca river, the second pursues a northerly course, till again dividing, one channel terminates in a smaller lake; the other proceeds in a north-easterly direction, until it is also lost in an extensive lagoon.

Lake Banyong (in the Wimmera district) receives the Avon river.

Lake Boga—one of the numerous lakes bordering the upper course of the Loddon, near its junction with the Murray or Hume; is about twelve miles round, fresh, and probably of considerable depth. A low neck of firm ground separates it from a smaller lake, (about three miles in circumference) which is surrounded with reeds and bulrushes, and covered with black swans, ducks, and other water fowl.

Lake Omeo, situated in the Australian Alps, between the Mitta Mitta and Livingstone rivers, is an extensive basin, marked in Mr. Ham's recent map (1849) by the emphatic monosyllable, "dry." Count Strzelecki, in 1840, describes it as possessing only the shape of a lake, with scanty water, and rich pasturage. It bears a striking analogy to Lake Bathurst and Lake George, being, like them, destitute of springs and feeders, above the level of the adjacent rivers, and assimilating, in shape, rather to a drained reservoir, than to the natural basin of a lake.

DIVISIONS.—The larger and more southerly portion of Victoria has been lately marked out into counties. The three first established were, the counties of Bourke

* The boundaries stated by Mr. Wells, in his *Australian Gazetteer* (1848), of the three first established counties, and of the five squatting districts above mentioned, are:—

Bourke County (Melbourne) sixty-five miles long, sixty broad, area about 2,500,000 acres, bounded on the south-west and west by the Werribbee, from its mouth to its source in the great dividing range; on the north by the great dividing range, from the source of the Werribbee to that of the Plenty river; on the east by Plenty river, from its source to its confluence with the Yarra Yarra river, thence upward by that river to the confluence of the Deep creek, thence by Deep creek upward to the point where the main stream commences to run in a north-west direction; thence by a line southerly from the aforesaid bend to the Dandenong creek; thence downward to the shore of the Port Phillip bay, and on the south by the shores of Port Phillip bay to the mouth of the Werribbee aforesaid.

* *Grant County* (Geelong), fifty-eight miles long, north to south; forty-two miles broad, east to west; area 1,000,000 acres; bounded on the east by the western boundary of Bourke County; on the north by the dividing range, extending from Mount Blackwood to Mount Buninyong; on the west by Williamson's creek, to its confluence with the Yarrowee river,

(containing the city of Melbourne), Grant (the town of Geelong), and Normanby (the town of Portland); to these have been added those of Follet, Dundas, Villiers, Ripon, Hampden, Heytesbury, Talbot, Grenville, Polworth, Dalhousie, Rodney, Anglesey, Evelyn, Mornington, Douro, Haddington, Bruce, Abinger, Combermere, and Howe.

The designations of Port Phillip or Australia Felix are frequently applied to the whole province, although the region on which the latter term was originally bestowed extends only between the Glenelg and Campaspe rivers. The north-eastern portion of Victoria is usually termed *Murray district*; the north-western, *Wimmera district*; the south-eastern, *Gipps' Land*; the south-western, *Portland Bay district*; and the central, *Western Port district*; but the exact limits of these temporary divisions are very vaguely defined, and can be but of little interest to the general reader.* The capital of a newly colonized region is necessarily the first object of interest; we therefore proceed at once to examine the condition of Melbourne.

Melbourne, the adjacent country, and the Western Port District generally.—The better to understand the actual position of this embryo capital of an embryo province, and to appreciate the incontrovertible evidence which it affords of the enterprising spirit of our Anglo-Australian brethren, we must look back upon its condition twelve years ago.

thence to its confluence with the Barwon river; and by that river to its source, and by a line south to the sea coast and the waters of Port Phillip bay.

* *Normanby County* (Portland), fifty miles long, north to south; eighty miles broad, east to west; area about 2,000,000 acres; bounded on the west by the Glenelg river, from its mouth to where the Wannon river joins it; on the north, by the Wannon river and Grange-Burn, thence by a line easterly to Lake Linlithgow, following Cameron's creek to its source, and by a line south-east to the head of Muston's creek; on the east by Muston's creek to its junction with the Hopkin's river, following the course of that river until it reaches the sea; and on the south by the sea-shore to the mouth of the Glenelg, including the Lawrence, Lady Julia, Percy's Island, and the small islands at Port Fairy.

* *Western Port District* is bounded on the south by the sea coast from Anderson's inlet to the south-east limit of the county of Bourke, further by the east and north boundaries of the said county to the Werribbee river, and a north-west line to Mount Cole, thence by a line to the Avoca river, by the Avoca river to Lake Bael-Bael, and thence by a line, due north, to the Murray river; on the north and north-east by the Murray to the Goulburn, following the latter river to its source, and on the east by a line

In January, 1838, it consisted of a nucleus of huts embowered in the forest foliage, and had much the appearance of an Indian village. Two wooden houses served the purpose of inns, for the settlers who frequented the place. A small square wooden building, with an old ship's bell suspended from a tree, was used as a church or chapel by the various religious denominations; two or three so-called shops formed emporiums for the sale of every description of useful articles; the flesh of the kangaroo and varieties of wild fowl were abundantly used, for fresh mutton was still scarce, and beef seldom seen; and a *manuscript* newspaper, established by Fawcner, one of the enterprising men to whom England is indebted for the formation of this settlement, was the organ of public opinion in the new colony.

Fortunately, on the spot selected for the city, excellent brick earth was discovered at the river side, and the neighbourhood yielded much fine and rough stone, adapted for the builder. The progress of Melbourne during the ensuing six months was extraordinary. Mr. Arden, one of its early residents, states, in the useful manual to which we have previously referred, that "so rapid had been its

running due south to Anderson's inlet. The area within the above limits is estimated at 10,000,000 acres.

"*Portland Bay District* is bounded on the west by part of the South Australian frontier; on the north by the range dividing the waters falling into the Murray, from the waters falling into the Glenelg and other rivers to the east of Portland bay, extending from the head of the Glenelg to Mount Cole; on the east by part of the Western Port district, and the county of Grant; and on the south by the sea coast, exclusive of the county of Normanby. Area about 10,000,000 acres. [This large extent of country is now being divided into several counties—see accompanying map.]

"*The Wimmera District* is bounded on the east by a line from Mount Cole to the source of the Avoca river, thence by the Avoca river to Lake Baelbael, thence by a line due north to the Murray river; on the north by the Murray to the South Australian frontier; on the west by the South Australian frontier to the range dividing the waters that fall into the Murray from those falling into the Glenelg, and other rivers to the eastward of Portland bay; and on the south by that range to Mount Cole. The area is estimated at 15,000,000 acres.

"*The Murray District* is bounded on the south and west by the Goulburn river, to its junction with the Murray river; on the north and north-east by the Murray river, and its tributaries; and on the south-east by the dividing range, termed the Australian Alps. It contains about 8,000,000 acres."

Mr. Wells does not give any assignable boundaries to Gipp's Land.

* The following statement shews the progress of

progress, as to render it impossible for the memory to keep pace with the movement." Brick buildings, some even of two or three stories high, were numerous; the inns were transformed into handsome and convenient hotels; the lines of streets had been cleared, marked, and were, in some parts, under a process of partial macadamization; many shops, warehouses, agencies, had been established; population had quadrupled; branches of two Sydney banks were in active operation; and, in October, the *Port Phillip Gazette* was issued from the printing-office of Melbourne.

The rapid growth of the capital* received, in the years 1841-2, a severe but temporary check. Its progress since, though less speedy, lacking the strong excitement, not to say the infatuation, which characterized its earlier formation, has been steady; and the Melbourne of 1850 would do no discredit to a province of far older establishment and more developed resources. The chief defect in the plan of the city is the concentration of the buildings, the plan originally laid down having been on too small a scale. This is easily accounted for, as Melbourne was not originally intended for the capital of the province, the locality selected by Sir

Melbourne from wild desert in 1836-7, to October, 1840. The figures and calculations are from June, 1837, to October, 1840:—

June, 1837—Population, 250; number of buildings, 36; value of buildings, £1,800; value of land, £3,517.

June, 1838—Population, 1,800; number of buildings, 300; value of buildings, £60,000; value of land, £17,406.

June, 1839—Population, 3,000; number of buildings, 560; value of buildings, £112,000; value of land, £169,542.

October, 1840—Population, 5,538; number of buildings, 923; value of buildings, £230,750; value of land, £372,600.

To the value of buildings £230,750

Add value of land 372,600

Add the stock in trade of 36 mercantile houses, averaging £10,000 } 360,000

Of 175 miscellaneous dealers, aver. £250 } 43,750

3,000 tons colonial shipping, averaging £20 per ton } 60,000

Deposits and capital of three banks, averaging £100,000 } 300,000

Paid up capital of five companies at £10,000 } 50,000

And the total value of property will be £1,392,000

One million three hundred and ninety-two thousand pounds sterling!

During the year 1840, the number of vessels which arrived at Melbourne was 313, nearly averaging one a-day (excepting the Sabbath), and the tonnage entering the port amounted to 54,928 tons.

Richard Bourke being Point Gellibrand, the peninsula forming the southern shore of Hobson's bay, (at the north-east end of the bay of Port Phillip,) on which Williamstown now stands. The want of fresh water at Williamstown appears to have been the chief obstacle to this design; while, on the other hand, the abundant supply afforded by the Yarra Yarra river to Melbourne and its vicinity, was naturally a striking advantage in the eyes of many intending settlers, who probably could not conveniently spare the time or means necessary to ensure a sufficiency of that indispensable article of subsistence. Williamstown is the anchorage station for ships, as only small craft pass up the Yarra Yarra to the capital.*

The public buildings of Melbourne, though necessarily not very numerous, are of a respectable, and even superior class. The court-house and gaol at Melbourne have been erected, at a cost to the colonists of £30,000. The gaol, a gloomy-looking pile, constructed of dark ferruginous sandstone, is favourably situated for health and exercise, and commands one of the finest marine views in the neighbourhood of the city. The building containing the government offices, placed on a commanding eminence in the western quarter of the town, near the court-house, is composed of dark blue whinstone and a light-greyish granite, which are judiciously blended. The custom-house, the next public building of importance, is stated to be a "chaste structure." The "Union" and the "Austral-Asian" banks have handsome houses. The episcopalian, presbyterian, Roman catholic, Wesleyan, independent, and congregational temples of worship, are all substantial edifices. There is a mechanics' institute, erected of stone, at a cost of £4,000, and various other public and private structures. There is a general market, a cattle market, and hay and corn markets, all under the superintendence of properly-qualified inspectors; and hotels of various grades. A bridge is now being constructed over the Yarra Yarra, composed of a single arch, 150 feet span, and thirty feet in width, which, it is estimated, will cost

£10,000. A botanical garden has been established in one of the beautiful bends of the river, and a good race-course has been laid out in the vicinity of the city. The streets are planned at right angles, the larger ones being a hundred feet in width, the smaller about thirty. The principal street is, strangely enough, named Collins, after the brave officer who, when directed, in 1803, to form a settlement at Port Phillip, declared it to be "all barren," and abandoned it as a hopeless undertaking. Elizabeth-street is situated in a hollow, between two considerable acclivities to the eastward and westward, called the Eastern and Western hills, the course of the river being nearly due west.

Melbourne is divided into four wards, and is under the municipal government of a corporation, consisting of a mayor, four aldermen, and twelve town councillors, whose exertions, though commenced at a period of general depression and commercial difficulty (November, 1842), speedily effected an improvement in the condition of the rising metropolis. The streets and by-ways of Melbourne (previous to the existence of the corporation) are described as having been frequently rendered impassable, from the operation of the weather, and the ceaseless traffic of ponderous bullock-drays. Thick gum tree stumps, and deep ruts, forming vast reservoirs of mud, were variegated by the intersecting gullies of temporary water-courses; and many an anxious wife and mother scanned the deep abyss of the urban excavations, in search of a drunken husband or a wayward child. A visitor, writing in 1842, declares himself to have been startled, soon after his arrival in the colony, by a paragraph in the newspaper, headed, "*Another child drowned in the streets of Melbourne.*" In the following year, however, the stumps were removed by order of the town council, and the occasion of frequent accidents thus removed.† On the south bank of the Yarra Yarra, within a distance of three miles from Melbourne, there are many pretty cottages, surrounded by fertile and productive gardens, extending over a gently undulating

* Captain Stokes relates an anecdote when describing the bay of Port Phillip, which well illustrates the difficulty of detecting the mouths of Australian rivers. "In the north-west corner of Hobson's bay is the mouth of the Yarra Yarra river; but although only one mile and-a-half from the general anchorage, it is very difficult to be made out. Soon after we (*i. e.* H.M.S. *Beagle*) anchored in Hobson's bay, a small schooner passed, going to Melbourne. Several of the

officers were at the time standing on the poop, and each selected a spot at which the schooner was to enter the river; and although, as I have before stated, we were only a mile and a half from it, none of us was right. A single tall bushy-topped tree, about a mile inland, rose over the schooner as she left the waters of Hobson's bay."

† *Australia Felix*, by Westgarth; *Sydney and Melbourne*, by Baker.

levelly to the water's edge. The beauty of the scenery is enhanced by hills, and bold woodland in the background.

To the left of the city, and almost forming a part of it, is a small green hill (Batman's) of a conical shape, washed at its base by the Yarra Yarra river, from which the ascent is rather precipitous. On the opposite side there is a gentle slope towards an open plain, with clumps of trees spread here and there in wild and irregular beauty. Further on is a long swamp, nearly always covered with water, which gives it the appearance of a fine lake; beyond it the Willoughby plains commence, studded with trees like an English park. The level of these plains is interrupted by a succession of green mounds, then by undulating flats, less timbered. The view is bounded by a lofty range of mountains, which begin near Geelong and continue many miles into the interior of the country.

On the east of Melbourne, the view is bounded by the *Western Port* range of mountains, which stretches from the sea-coast inland until it reaches the *Plenty* range. The country between Melbourne and Western Port is a vast forest, broken at regular intervals by a succession of hills and valleys, which present many picturesque views.

The township of Collingwood, formerly Newtown, almost joins Melbourne; it has three hotels, one brewery, and numerous stores. Further inland, upon the banks of the Yarra Yarra, is the township of Clifton. For many miles the banks of this "wildly beautiful stream" are lined with villas and parks, and fringed with the graceful Yarra and mimosa trees.

In a westerly direction from Melbourne, in the direction of Mount Macedon, an open grassy plain extends for more than thirty miles, traversed by numerous creeks, and thickly covered with homesteads. The soil is light and dry, producing excellent pasture for sheep. Further west are the deep and romantic gullies of the Werribbee and adjacent creeks. The north portion of the Western Port district contains much valuable land, especially the extensive plains which extend between the Loddon and the Campaspe rivers, and also between the Campaspe and Goulburn or Bayunga, immediately below their junction with the Hume, to the south of which open forest country, clothed with good grass, but with occasional belts of scrub, extends along the eastern bank of the Loddon river.

Mr. James, speaking generally of the country behind the coast of Port Phillip and Portland Bay, describes it as among "the finest countries not only in Australia but perhaps in the world. Nobody can visit the banks of the Yarra Yarra, the heads of the river Plenty, the country about Mount Macedon, and the river Campaspe, without being charmed with its magnificence and brilliancy."

Mr. Richard Howitt—who was unfortunate in his attempt to settle in Victoria, partly (it would appear even from his interesting account of his proceedings) from his own inexperience, and want of perseverance, but chiefly from the disastrous period during which that attempt was made—in describing an excursion in search of his stray bullocks, which led him to within twelve miles of Mount Macedon, bears the following testimony to the goodness of the land:—"A more picturesque and beautiful region was never looked upon. I saw a great deal of very delightful country; it had a delicately-smooth lawnlike surface, without scrub or stones. Around me spread a spacious plain, the 'she oaks,' a rich silky brown, scattered thinly and in clumps; further off, bounding the plain, knolls, slopes, and glens, all of the smoothest outline, crowned or sprinkled with the same trees; and beyond, mountains and mountain ranges on which rested deliciously the blue of the summer heavens. Some of these mountains were wooded to the summits, others revealed through openings immeasurable plains, where sheep were whitely dotting the landscape, the golden shadows seen at intervals betwixt the long shadows of the 'she oaks.' A more splendid and extensive country there is not in the world for sheep and cattle than Australia Felix. How fat and sleek are its immense herds! I speak not here of the immediate neighbourhood of the town, but of the country generally." *

Williamstown (the sea-port town of Melbourne) whose early pretensions have been so effectually overshadowed by its powerful neighbour, is at present a mere coast village, with about 126 houses and 322 inhabitants. It nevertheless possesses great natural advantages. Situated at the head of the harbour of Port Phillip, with fine anchorage, a beach admirably adapted for the construction of piers and wharfs, and a considerable extent of level land washed on

* *Howitt's Impressions of Australia Felix*, pp. 108—115.

three sides by the sea, it is only reasonable to suppose that Williamstown will eventually become an important place, as its disadvantage (the want of water) is remediable. The only fault in its haven (Hobson's bay) appears to be that Point Gellibrand scarcely projects sufficiently to shelter large ships from south winds.

St. Kilda and *Brighton*, are two pleasant villages, situated on the eastern shore of the bay of Port Phillip, the former about two or three, the latter about six miles from Melbourne, in both of which are a considerable number of rural villas and *cottages ornée*, the residences, either constant or occasional, of respectable persons in business in the city. *St. Kilda* is the first point on the bay to the eastward, where the land is sufficiently elevated to be above the reach of all land-floods, and the terrace to seaward, in front of the line of houses along the bay, both there and at Brighton, at all seasons, in so fine a climate, forms a delightful promenade.

The route and distances by which the "royal mail" travels from Melbourne, the capital of Victoria, to Sydney, the capital of New South Wales, are—*Melbourne* to *Kinlochewe*, 18 miles; *Kilmore*, 32; *Goulburn river*, 25; *Honeysuckle creek*, 56; *Ovens river*, 53; *Albury*, 50; *Tarcotta creek*, 85; *Gundagai*, 35; *Yass*, 66; *Goulburn*, 60; *Berrima*, 40; *Campbeltown*, 47; *Sydney*, 33; total, 590 miles. Some of these estimates, however, must be under the mark, for the whole distance is about 600 miles. The "royal mail" leaves Sydney and Melbourne twice in each week.

From Melbourne to Portland, 253 miles, there is also a "royal mail" conveyance once a week. Three steam boats ply daily between Melbourne and Geelong.

Geelong and its vicinity.—Geelong, the capital of the county of Grant (distant forty-five miles from Melbourne) stands partly on the picturesque cliffs of the fine harbour whose anchorage it overlooks, and partly on the river Barwon. Geelong harbour is situated at the head of the deep inlet formed by the western arm of Port Phillip. Its southern point is a level expanse of land, named Point Henry, from which a long spit extends, leaving only a shoal channel between it and the northern shore. Thus, though the harbour has apparently a broad open mouth, it is impossible for a large ship to enter it, so that the vessels which are annually charged with the large quantities of wool now exported from Geelong, are obliged to lie to

the eastward of Point Henry, about seven miles distant from the port. The bar, which has but nine feet water at high tide, is said to be composed of an ancient deposit of shells and other matter of inferior tenacity, and its removal is considered practicable. Geelong has several commodious places of worship; some good warehouses have been erected in the town, and the neighbourhood is adorned with cottages and gardens. The principal inn (Mack's hotel) is built on a very large and expensive scale. Like most other Australian towns, Geelong has its race ground. Two small steam-boats ply on alternate days between Geelong and Melbourne, a passage of about six hours' duration. Geelong and Corio each support a weekly newspaper.

The same policy, noticed in a previous instance, as having proved so *unconcentrative*, is exemplified yet more forcibly in the case of Geelong. The high price fixed upon the town allotments being found to hinder its formation, Sir George Gipps separated the township into two parts, calling the portion nearest the harbour North Geelong, and the other South Geelong, the minimum price of allotments in the former being £300 an acre, in the latter, £150. Suburban allotments, however, being procurable at the rate of £5 an acre, in one locality, and of £2 in another, opposition towns were formed immediately beyond the boundaries of the government towns. There is thus the rival town of *Ashby*, a mile from North Geelong; *Irishtown*, the rival of South Geelong, from which it is also a mile distant; and *Newtown*, a third opposition town, between the other two. The last census (1846) states the population of the government towns at 1,370, and that of the three opposition towns at 695. Corio, (pronounced Coraio, with the accent on the second syllable), is the native name for the beach at Geelong: the residents in the place usually call the town of North Geelong, Corio. About a mile and-a-quarter from Corio, the Barwon river passes Geelong, in its tortuous course, to the ocean; and as there is a natural terrace on each side of the river, parallel to its banks, several suburban allotments have been purchased in the vicinity, and delightful villas constructed on either bank. The country round Geelong and the neighbouring villages is admired alike for the beauty of its scenery and the richness of its soil, which will probably eventually render it a valuable agricultural district. A vineyard,

established near Geelong, among the Barrabool hills, by three families of Vignerons, from the canton of Neuchâtel in Switzerland, produced, in 1846, at the rate of 1,000 gallons of wine per acre. The peninsula included between the Barwon river and the western arm of Port Phillip, which is probably about twenty-five miles in length, from Indented Head to Geelong, contains about 160,000 acres, of which the greater part consists of land of the first quality, whether for pasture or cultivation. It seems to be a continuation of the same tract of level country that stretches along for upwards of 200 miles to the westward of Geelong, between the coast range, or Marrack hills, and the ranges of the interior.

To the westward of Geelong, grassy hills, occasionally varied with clumps of trees, extend towards lake Colac. An immense forest, between Geelong and Melbourne, was at first reported to be composed of cedar. On subsequent investigation, it appeared that the trees were not cedar, but a hard, solid, close-grained, dark-brown coloured wood, with straight trunks of twenty-five feet, and an average circumference of nine feet.

The country from Geelong to the Glenelg river may, in general terms, be described as a parallelogram, of 200 miles in length, by twenty-five miles in average breadth, the whole of which consists of land of the first quality for cultivation. It is nearly a dead level; and, for a railway, would present few engineering difficulties, and require no tunnelling or embankments. There is abundance of indigenous hard timber throughout; and a wooden railway might be laid down, at a cost of £1,000 per mile, whereby upwards of three million acres of the richest land would be rendered immediately available for the settlement of a numerous agricultural population.

Portland Bay District and Portland Town.—This district consists of a series of undulations, intersected by numerous rivers and creeks. *Portland*, the chief town of Normanby county, and indeed of the Portland Bay district, is built on slightly rising ground, on the western side of the fine bay, whose name it bears. It is well placed, presenting a fine bold terrace towards the sea, backed by a sufficient extent of level ground for a large town.

The first town allotments in Portland were sold on the 15th October, 1840, and the land mania having then reached its height, the

forty allotments then disposed of realised £11,026. Dr. Lang, writing in 1847, says, that nearly £30,000 have since been invested in buildings. The population of Portland in 1846 was 510. Its trade is already considerable, and it has two respectable weekly journals. Mr. Angas, speaking from personal observation, says that the country in this vicinity bears marks of having been raised by volcanic action from beneath the ocean; the same white coral limestone which occurs at Mount Gambier, also appears here. The aspect of the land resembles that in the neighbourhood of Cape Northumberland, and it would seem that a similar belt of country extends in this direction. A thickly wooded district is in the immediate vicinity of the bay, consisting of stunted eucalypti, black-wood, mimosa-wattle, the cherry (*exocarpus*), and a little underwood. The soil is rich, the country verdant, even in mid-winter, and the climate cooler than that of Adelaide. The establishments of Messrs. Henty (the first settlers at Portland Bay) are extensive, and the town has grown up around them. The soil around Portland Bay is described to be of the richest alluvial kind; the vegetable productions remarkable for their size and quality—the barley “yielding for four years a continued crop”—the timber peculiar for both beauty and utility, and the climate unrivalled. Several whaling vessels annually take up their stations in the bay, the property of parties residing in the neighbouring colonies. The anchorage is good; the water in the harbour sometimes smooth enough to admit of landing from boats; it is, however, often troublesome, and indeed dangerous, to debark on the open beach; and several shipwrecks and loss of life have occurred. A wooden railroad and jetty have been constructed from the stringy bark wood in the neighbouring forest, for the conveyance of goods to and from the vessels in the bay.

Belfast is a thriving sea-port town, also situated in the county of Normanby, on Port Fairy. It is 779 miles from Sydney. Population in 1846 was 269.

One of the finest tracts in the district is situated between the Grampians and the boundary of South Australia. The rich black soil, several feet deep on a subsoil of clay, is lightly wooded, covered with the finest pasturage, and abundantly watered by the Grange Burn, Wannon, Glenelg, and their tributaries. The country near the coast, between the mouth of the Glenelg

and Point Fairy, is generally poor, but there is some better soil on the banks of the river Crawford, and the land on the Fitzroy river is adapted for either grazing or cultivation. In the immediate vicinity of Mount Eckerley (Normanby county), there is a tract called "the five-mile patch," reported to be of extraordinary fertility. Mount Rouse (Villiers county) is of trap formation, the soil around it, and between it and Mount Shadwell is good, but swamps are numerous. An open forest of stunted Banksia extends six miles to the northward of Mount Rouse. Fine downs for two or three miles in width, divide this from an open forest (chiefly of eucalypti) extending some distance east and west of Mount Sturgeon, the soil being pretty good.*

The country around Cape Otway is almost unknown, owing to its being densely timbered with forest trees of gigantic size, covered with rank and nearly tropical vegetation, consisting of an undergrowth of vines and other creepers, which flourish with extraordinary luxuriance, and form a trellis-work from tree to tree, through which a passage can with difficulty be effected by a tomahawk; the whole intersected with ravines and ranges which render exploration very difficult. This tract extends over about two million of acres, and is said by the few who have penetrated it to some extent to be plentifully watered by running streams. The timber is of the most valuable description, and includes a cedar not found in other parts of the province. The country, although now considered wild and impracticable will, it is supposed, from its peculiar resources, be eventually found available for small settlers of the non-stockholding yeomanry.

An open country, with vast plains, extends from Lake Colac and the river Leigh, to the north and west of Lake Corangymite and Mount Elephant. To the southward of Colac Lake there is a romantically beautiful district, with a thickly grassed soil, interspersed with the tracts termed "stony rises." Near Lake Corangymite the land is equally fine, especially to the westward. In the neighbourhood of Lake Killambeet there are plains of great extent, belted with tall trees, copses, and open forest. North-west of Lake Porumbeet, on the road from Melbourne to Portland, "the country," says Dr. Lang, "for the next seven or eight miles, continues pretty much the same as before, rich plains, slightly undulating, with

a thick carpeting of grass, but with a somewhat greater frequency and variety of natural wood." The Mount Leura district is remarkably well watered, rain is frequent, springs abundant, as well as creeks or small streams, and water holes, or natural pools. A whimsical proof of the contrast afforded by a large portion of the Portland Bay district and the adjacent regions, to the impenetrable nature of other parts of the province, was afforded in the early days of the colony by Messrs. Hawdon and Mundy, who left the neighbourhood of Mount Macedon, in a *tandem*, on the 11th of July, 1839, and drove through the uninhabited country to Adelaide, a distance of 540 miles in twenty-seven days. They described this extensive region as being for the greater part like an English park.

Wimmera Squatting District.—Sandy wastes, alternating with extensive tracts, covered with the impenetrable scrub (*eucalyptus dumosa*) called *Mallee* by the aborigines, render the northern and western portions of this district hopelessly barren; but on the east of the Wimmera river a good sheep country extends in a parallel direction with the river, composed of light forest and plains. The lakes of this district are numerous, the chief of them, namely, Hindmarsh, Boga, Bael-Bael, and others, have been already mentioned.

Murray District.—Count Strzelecki, on his journey to Gipps' Land, visited this district, and crossed *Mane's range*, a spur of the Australian Alps, which divides the tributary creeks that flow from either side to the Murray and the Murrumbidgee. To the eastward of the meridian of 148° the mountains present the effects of some extraordinary perturbations, and form many culminating and characteristic eminences; to the westward they are grouped in confusion, and the country is broken, rocky, and often impassable. But both the ranges and valleys furnish abundant natural and artificial crops, as is evident from the healthy state of the sheep and cattle, and from the returns of grain which the squatters obtain from the culture of the soil. Between the Mane and Ajuk ranges north of the parallel of 37°, every feature bears the stamp of grandeur; the broken country to the westward in which the Tangella creek takes its rise, to the eastward, the dividing range, here called the Australian Alps, with its stupendous peaks and domes, and in front the beautiful valley which the Murray so bountifully waters,

* *Tyer's Report.*

unite to form attractions of no ordinary magnitude. Count Strzelecki followed the windings of a valley in this district for about seventy miles, and found it intersected by gullies and torrents, and by numberless steep ridges.

The soil in all the valleys is composed of disintegrated argillaceous and calcareous rocks, richly mixed with sediments of decomposed vegetable matter. For pasture and agriculture, the valley of the Murray, with those adjacent, and the country round Lake Omeo, offer the most suitable spots. Strzelecki says, the Murray, with its tributaries, the Mitta-Mitta, and others, supply both the valleys and Omeo with plentiful streams; everywhere nature seems to have most liberally enriched this district for the benefit of man.

Mercer's Vale is a grassy plain of ten or twelve miles in extent, almost completely destitute of timber, and surrounded in great measure by hills of moderate elevation, and distant mountain ranges.

Gipps' Land District and Alberton.—This important section of the Victoria Province may be said to extend from Cape Howe to Cape Paterson, near Western Port, on a sea-coast line of about three hundred miles. The inland boundary is marked by the Strzelecki range and Australian Alps, stretching from Western Port to Mount Kosciusko; thence to Cape Howe along the boundary line which separates Victoria Province from New South Wales. The portion examined by Count Strzelecki, in 1840, from the Thompson river to the southward has a sea-coast of about 250 miles in extent, and comprises an area estimated at 5,600 square miles, of which about 3,600 consist of forests, plains, and valleys, which in richness of soil, pasturage, inland navigation, and situation, cannot, it is said, be surpassed. Two thousand square miles of the coast range are clothed with the blue gum and black butt trees of excellent quality, and contain many large and deep valleys, well adapted for cattle. The country is abundantly watered by numerous rivers, and by a navigable lake and lagoons which bisect the coast for 100 miles.

According to the Parliamentary Papers, No. 120 (9th March, 1841), containing the copy of a despatch by Sir G. Gipps, which shows the progressive discovery and occupation of New South Wales during the period of his administration, "Gipps' Land" begins at 17 miles S.S.E. from Lake Omeo, and

is bounded on the N.E. by the meridian of 148°. In this report, Strzelecki says, that few of the parts explored presented him with more gratifying prospects than this division: a beautiful stream, the first of the eastern waters, winding through a fine valley, soon assumed the features of a river (the Thompson), and appeared to be a guide into a country hitherto unoccupied by the white man. A hilly country closes the valley, narrows the river banks, and brings the explorer across the mountain ridges to an elevation from whence there is a view of the sea on the distant horizon; to the south-east an undulating country, with mountain ridges to the north-east. Approaching or receding from the river according to the windings of its bordering hills, the descent into a noble forest tract is effected.

The valley of the Thompson river is separated from that of the M'Arthur, which is wide and covered with luxuriant pasture, and slopes gradually in open forest ground to Lake King and the sea-coast. From the M'Arthur river, a south-west course leads through forest and pasture country, crossed by several rivers, and intersected by hills clothed with timber; the coast range of mountains approaches nearer to the ocean, and narrows the expanse of forest into a vast valley. The magnificent prairies termed *Barney's Plains*, from thirty to fifty miles in extent, and bordered by copious streams, are surrounded by the most attractive scenery. The dividing range is continued in a south-east direction to Wilson's promontory, and presents some fine panoramic views. Viewed from Mount Gisborne, Gipps' Land is described by its explorer, as resembling a semi-lunar amphitheatre, walled from north-east to south-west by lofty and picturesque mountain scenery, and open towards the south-east, where it faces with its sloping area the uninterrupted horizon of the sea.

Most of the ranges between Gipps' Land and Western Port are of easy ascent and descent, none are rocky or of a precipitate character; and there are several facilities for opening this region, which may be termed the Switzerland of Australia, to the enterprise of the settlers. These ranges are nevertheless so densely covered with scrub, interwoven with grasses, and encumbered with gigantic trees, fallen and scattered in confusion, that Strzelecki, when passing from Gipps' Land to Western Port, was forced, in the route adopted, at its very commencement, to abandon his pack-horses

and collections; and not until after twenty-six days of incessant labour did he and his half-famished party succeed in extricating themselves from a situation in which they were in imminent danger of perishing. Such were the difficulties encountered on that occasion, that, with the utmost exertion, stimulated by the sense of peril, a progress of from two to three miles a day, was all that could be accomplished.

The honour of discovering this district is disputed with Count Strzelecki by Mr. M'Millan, overseer for the Messrs. M'Alister, of New South Wales, who in January 1840, made an expedition into an unexplored country, which, from its resemblance to his native land, he named *Caledonia Australis*, and in the following month wrote to his employers a somewhat detailed description concerning it. The result of Count Strzelecki's expedition was made known in July, but without attempting to decide the question of priority of discovery, the merit of acquainting the public with the existence of these fine pastures certainly rests with the Count.

There are three distinct descriptions of land in the Gipps Land district. The first consists of poor sandy soil and dense scrub; the second, of open forest, forming good pasture land; and the third, of the best quality for cultivation. Of the first description, is the land along the sea coast, and also the higher mountains, which are, for the most part, covered with dense scrub, growing on masses of disintegrated granite or sand. The back country, generally, towards the base of the mountains that hem in the district, may be included in the second description: while the third comprises the alluvial soil, within two or three miles of the rivers, and a belt of five to twenty miles in breadth, generally along the lakes, from the Tambo river to Alberton. Dr. Lang thinks there are no less than 500 square miles = 320,000 acres, of these rich flats, unencumbered with timber, and ready for the plough; close to navigable water; so gently undulating, that hardly any change in the level is observable; with abundance of white, blue, and blackish limestone, from the vicinage of the snow-covered Australian Alps, and the southern coast of the Pacific, blessed with abundance of rain, and enjoying a cool but genial climate. The lakes are quite fresh in winter, and the rivers always so: but in February and March, the water of the lakes becomes rather brackish. It is,

however, fit for stock; and pure water may, at any time, be obtained by sinking wells. Gipps Land furnishes considerable quantities of fat cattle, which are sent for sale to Van Diemen's Island; and an enterprising settler, Mr. M'Leod, has the contract for the supply of fresh meat for the government at Hobart Town (Van Diemen's Land.)

Alberton, the port of Gipps Land, in 38° 44' S., 146° 41' E., is situated on the left bank of Albert river, and within two miles of the Tarra river, which is to the eastward. It occupies a very important position, and is rising into eminence. Alberton is distant from the Latrobe river twenty-five miles; at this point, the road into the interior crosses the Latrobe, and a tram or wooden rail from Alberton, will open the inland communication. Steam-vessels are probably, by this time, plying between the Albert and Melbourne, a distance of 220 miles by the coast line.

GEOLOGY.—The principal geological feature in this division of Australia is the volcanic region, which extends over an area of 300 miles from east to west, and 100 to 150 miles from north to south. There are no volcanoes at the present time, but there are numerous craters, which by some are supposed to have poured forth their lava and fire while Southern Australia was still submerged beneath the Pacific Ocean. Of the number and size of these volcanic cones we have as yet no precise intelligence. Mount Leura, which is situated between lakes Timboon and Porumbet, to the eastward of Lake Corangymite, is upwards of 600 feet in height, has about a fifth part of the rim of the ancient crater remaining; within the crater a conical hill has been formed, its summit nearly on a level with the exterior rim, and covered with trees and brushwood. The ascent towards the top of the mount is very steep. The sides are plentifully covered with scorix and fragments of rocks that have undergone the action of fire; but Dr. Lang, who examined the crater, did not observe any of the light pumice-stone, or cellular lava, which are found in such large masses in the volcanic region of the Mount Macedon district. Blocks of igneous rocks are seen for miles around Mount Leura, protruding from a deep chocolate-coloured soil, consisting chiefly of decomposed volcanic matter. From the summit of Mount Leura twelve volcanic cones are visible, and as many lakes, several of which were formerly the craters of other extinct volcanoes. Of these Mount

Eccles, near Portland bay, is the most perfect; it has a small lake of fresh water at the bottom of the crater, much frequented by wild fowl; the lava which it formerly poured forth can be traced for ten miles. Mount Eccles is fifty miles due west from Mount Shadwell; Mount Rouse (elevation 526 feet) thirty miles distant to the northward of west; and Mount Napier, a well-defined crater, is forty-five miles, nearly to the northward of west. Mount Napier is surrounded by sharp angular fragments of trap. These three mountains are all within a few miles of the 142nd degree of east longitude. It is therefore a region of great interest to geological inquirers, and a proper survey would add materially to the facts which are being registered in different countries in illustration of the changes this earth has undergone. Canada, New Brunswick, Nova Scotia, Prince Edward Island, and other colonies (of older establishment, it must however be remembered,) have each provided out of their local revenues the funds necessary for geological surveys of their respective provinces; and it is to be hoped that this important duty will not be long delayed in Austral-Asia, not only for the sake of science, but as a means of exploring the mineral treasures, and of becoming better acquainted with the qualities of the soil, in order to its more successful cultivation. Tracts termed *stony rises* exist in several districts; they are usually ranged around, or in the vicinity of, a volcano, and consist of innumerable hillocks or ridges of rocky fragments, varying in height from ten to fifty feet, crowded together in a confused manner, as if ejected from the neighbouring volcanoes. Mr. Westgarth is of opinion that they have been caused by some subterranean force at no great depth from the surface, which has raised up and broken into fragments the rocky covering previously spread by igneous action over a great extent of this part of Australia. Some of these *rises* are not stony, but smooth and covered with grass, and beneath the soil is a stratum of earthy limestone. The rock of the *stony rises*, which is of basaltic character, usually vesicular in structure, with a large admixture of iron, is probably beneath the earthy limestone strata. The rocks enclosing the singular valleys, containing the stagnant salt lakes near Mount Nicholson, are composed of basalt, and in an adjacent running stream it lies in blocks, forming small cliffs.

The general character of the rocks in the province is vesicular trap, or cellular lava. The sides of many of the hills, particularly those of Mounts Elephant and Nanime, are covered with a vast quantity of heavy scoræ, resembling the refuse of smelted iron.

Throughout the country traversed by Mr. Tyers, except where the formation was limestone or granitic, the magnetic properties of the rocks were so great, as to render the needle almost useless as a surveying instrument. In some cases, the deviation of the pole from the magnetic north was upwards of ten degrees. In his route from Melbourne, Mr. Tyers proceeded by Geelong, westward, to Mount Shadwell; thence to Mount Rouse; then north to Lake Linlithgow; then westerly to Yo-ho ponds; thence south to Mount Eckersley and Portland bay; and from thence along the coast to the Glenelg river. His return route was nearly on the same line, until he reached Mount Sturgeon, whence he travelled to Melbourne by Lake Bolac, at a distance of twenty to thirty miles north of his outward-bound route.

The Pyrenees terminate to the southward in Mount Cole, a lofty mass of granite, as do also the Australian Alps, Wilson's Promontory being of hard granite, about twenty miles long, by six to fourteen miles broad. There are immense surface masses of this formation at the distance of five and ten miles from Melbourne; said to equal that obtained near Aberdeen. The stone in some places bids defiance to the best tempered tools; but the manner in which the Chinese split the hardest granite into columns twenty or thirty feet long might be tried. They drill holes at short distances along the splitting line, and then insert dry spongy withs, or a reedy substance, which, on the application of moisture and heat divides the largest blocks into the thickness required.

Granite is found protruding in some places in the valley of the Glenelg river. It varies considerably in the size of its component parts, which sometimes, especially in quartz and felspar, exceed one foot square; and in this Sir T. Mitchell found distinctly imbedded friable masses, apparently of sandstone, but which on further examination were ascertained to consist of a very fine-grained grey granite, approaching in its character to mica slate. The bluff hill called Mount Cole consists of huge blocks

of granite, composed of pink felspar, white quartz, and silvery mica.

The base of the Bunninyong or Brisbane range is supposed to be schistus. Mount Bunninyong, its southern termination, 1570 feet in perpendicular height, is of volcanic origin. Mount Macedon is sienitic.

In a small marsh near Mount Macedon, about five feet below the surface, and immediately beneath a dark alluvium, about a foot in thickness, covered by a bed of yellow clay, of eighteen inches, on which rested a stratum of rich black soil, there were found, in 1846, the fossil bones of several extinct animals. Mr. P. Mayne was the discoverer, and they are described by Mr. M'Combie, a gentleman who has exerted himself with success in making the condition of the Australian colonies understood, and who is now the editor of the *Port Phillip Gazette*:—

"Amongst the bones found are the molar teeth, under-jaw part of a femur, humerus, and scapula, and other bones of a very large animal, resembling, in many of its anatomical characters, those of the mastodon. The molar teeth consist of the recurved transverse ridges, which were covered externally by a thick layer of enamel. The posterior ridge has, at its base, a small transverse prominence, covered by enamel, which ran parallel to the facet. The two ridges are united by an isthmus of crusta-petrosa, so characteristic of the mastodon. The largest of these teeth measured one inch eight lines transversely, and in an antero-postero direction, one inch six lines. The distance between the ridge of the crown and the extremity of the fang, in one of the largest specimens, was three inches six lines. The discovery of half an inferior jaw-bone, with the teeth *in situ*, gives the following dental formula:—incisors, 2; canines, 0; molars, 6; but this, however, requires other confirmatory observations. The enamel is arranged (with a very trifling difference) like that in the European and American species of mastodon, the mammilloid character of the tooth only being wanting; but the solitary incisor, and the isthmus of crusta-petrosa uniting the bases of the angular ridges of the molars, are highly characteristic of the mastodon. The largest bone, which appears to be the shaft of a thigh bone, has, unfortunately, both its articular extremities broken off; but from its broad and flattened character, it must have given support to a ponderous carcase. Its broadest part measured ten inches in circumference. The blade bone, or scapula, is also a large and strong bone, but so much mutilated as to have lost its features. Molar and incisor teeth, with other bones of a large species of kangaroo, exceeding by one-third, at least, the largest individual of the present *macropus major*, are abundant. This fossil is probably identical with that found in the Wellington caves by Sir Thomas Mitchell, and called by Professor Owen, *macropus titan*. Two incisor teeth of a huge rhodent were also found amongst these bones."

Mount Sturgeon, the southern extremity of the Grampians, is said by some to be a conspicuous mass of granite, and by other writers

is described as consisting of a fine ferruginous sandstone, in which is imbedded a quantity of quartz; but between Mount Sturgeon and Mount Eckerley, twenty miles to the northward of Portland, and sixty miles in a direct line south-west of Mount Sturgeon, the rocks are chiefly trap, which indicates the volcanic character of the intermediate plain.

At the extremities of Mount Napier, in Normanby county, rough sharp-pointed fragments of cellular rocks are scattered about in heaps; the cells or pores are several inches in diameter, and, unlike amygdaloidal rocks, are all empty. The reefs at Portland Bay consist of a similar rock in rounded nodules, and a more compact trap rock, consisting principally of felspar, lying above them.

Near Cape Otway the sea-coast is of a sandstone formation; the cliffs attain, in some places, 100 feet in perpendicular height, and are studded with granite pebbles, like plums in a plum-pudding. About ten miles to the west of Cape Otway there is a remarkable cave, large enough to hold some hundred men, with a beautiful crystallized substance, formed by the dropping of water for years, and hanging from its centre, like a chandelier.

From Port Fairy to the Glenelg river, the country is of limestone formation, and, at these two places, nearly pure. The cliffs at Portland Bay are composed of an arinaeous limestone (containing oysters, and the exuviae of other shell-fish), ferruginous sandstone, and trap. Over the limestone is a red clay, and a red pigment or ochre, used by the natives for painting their bodies. Half-way between the Glenelg river and Portland bay, on the south-east side of a lake, are cliffs of conglomerate, composed of quartz, trap, sand, and shells, about twenty feet high, in horizontal laminae of an inch thick, with narrow vertical strata of pure lime. Fine-grained sienite has been found at Mount Henly station, on the Wannon river.

The country between the Murray and the vicinity of Lake Omeo shows, on an extensive scale, the primitive and secondary rocks: argillite and quartz rock on the one side to the east; old red sandstone, with conglomerates, on the other to the west; the petrosiliceous porphyry, as intermediate or transition rock, appears as if only to indicate their respective limits. The numberless streams of lava, the trachitic rocks, and others, which, through intense heat, have had some of their constituent ingredients

altered, give evident proofs of volcanic agency, to which Lake Onego may have originally served as a laboratory.*

MINERALOGY.—The volcanic character of the country indicates the presence of rich minerals, but, as yet, little attention has been paid to the subject. Copper and lead ore have been found on the banks of the Barwon river, in the Geelong district. The specific gravity of the lead ore is 6.4 per cent. Copper ore, lead, platina, and manganese, have been discovered along the coast from Point Urquhart to Moonlight Head, at Cape Otway. The ore runs in horizontal veins of four miles in breadth, varying from east-north-east to west-south-west. The specimens of copper ore collected in this district yielded, on an average, forty-five per cent. of copper.

The rivulets Merri and Darebin, in Melbourne district, are strongly impregnated with aluminous matter. *Ironstone* abounds in several districts, usually in the shape of pebbles strewed over a plain. Surveyor Hoddle, in his survey of the country near Melbourne, found that seventy-five per cent. of this stone consisted of iron ore; and so powerful was its effects upon the instruments of the surveyors, as to render it necessary to sell the sections of land at a certain number of acres, more or less, it being found impossible, in some situations, to obtain correct measurements. The sides of Mounts Elephant and *Nanime*, particularly those of the latter, are covered with a quantity of scorizæ somewhat resembling the refuse of smelted iron. These mounts bear every appearance of having had a volcanic origin; their form is that of a horse-shoe, open to the westward; the interior sides slope down almost to a level with the exterior bases.

Gold is reported to be plentiful in the Pyrene mountains, distant about 100 miles from Melbourne. It is said to have been discovered by a shepherd lad, who, after selling his gold at the city, returned to seek for more; he was followed by some persons, and not having since been heard of, is supposed to have been murdered. Dr. Clutterbuck saw, in 1849, at the shop of Mr. Brentani, a watchmaker and jeweller, at Melbourne, several pieces of native gold—one lump, of great purity, weighing twenty-two ounces, exhibited minute portions of quartz, was soft in texture, easily cut with a knife, of uneven surface, somewhat oblong,

* Report by Count Strzelecki to Sir G. Gipps.

and more than an inch in thickness, as if taken from a perpendicular fissure in the rock. Mr. Brentani is said to have a lump weighing seventy-two ounces. The commander of the ship *Berkshire*, which left Port Phillip for London, 25th February, 1849, purchased fourteen ounces of the native gold from Mr. Brentani at eighty shillings per ounce. Gold-dust has been found in the river *Plenty*, in the bed of the stream, which consists chiefly of mica. Quartz sent to England for analysis, yielded twenty-eight ounces of gold for each ton of ore. The geological structure of Victoria province indicates the presence of the precious metals, which will probably be found extensively distributed.

Salt is obtainable in abundance from the waters of the interior lakes. Professor Faraday examined specimens of the waters collected from the salt lakes by Sir T. Mitchell, and stated that all of them were solutions of common salt, much surpassing the ocean, or even the Mediterranean, in the quantity of salt dissolved. Besides the common salt, there were present (in comparatively small quantities) portions of sulphates and muriates of lime and of magnesia; the waters, except in strength, very much resembled those of the ocean. Three drams of the waters of lake *Cockajemmy* yielded 113 grains of dry saline matter, others seventy-seven grains. A quantity of the salt deposited on the shores of Lake Bolac, analyzed by Dr. Anderson, of Edinburgh, gave the following results:—chloride of sodium (common salt), 99.654; sulphate of soda, 0.104; chloride of magnesium, 0.052; insoluble residue, 0.190; lime, a trace=100.000. It was described as "a remarkably fine looking salt." When the summer heat has caused great evaporation, the bed of a lake is sometimes found quite dry, and covered with salt crystals to the depth of three or four, or even six inches, within the usual water mark. In the vicinity of Lake Corangymite, the settler has only to send a bullock-dray in the morning, with a few men, and it returns in the evening with a load of two tons weight. For the curing of meat, and the improvement of the soil, this mineral will be found very valuable.

These salt lakes are found in the region where there are several extinct craters. The production of salt is not unfrequently accompanied by volcanic action, as in Sicily and other places. Many of the rocks near the salt lakes of Australia are of the trap

formation; and Sir T. Mitchell states that a dark-coloured soil is found in the ridges about some of these lakes. I am disposed to think that the deposits of salt are obtained from the saline earth, rather than to agree with Sir T. Mitchell, that "the sea deposited the water in these situations at no very remote period." Some of the lakes have been filled again and again by rain and fresh river-water, but the summer evaporation annually leaves a fresh deposit of salt.

Very good limestone is quarried at Point Nepean, the head of the Port Phillip bay; and lime of fine quality, used as stucco for the outsides of houses, walls, and columns, is made from oyster and cockle shells, of which extensive beds are found around the bay. The whole of the coast line from the Glenelg river to Port Fairy (eighty miles) is of limestone formation, and this probably extends some distance into the interior. In the northern part of Alberton district there is a great quantity of limestone of various kinds, some white, some blue, and some black; and on the banks of the Mitchell river, about twenty miles from Lake King, there are large banks of oyster and other fossil shells under a thick layer of earth. A hill of marble was found by surveyor Stapylton near Mount Macedon.

Coal is found at Western Port, but no mine is yet worked. It is also stated to exist to an almost unlimited extent near Loutit bay, which is about three miles from Cape Otway. The coal lies in large quantities along that part of the coast.

The following abstract of the report of Mr. Cameron, who was deputed by the local authorities at Melbourne to examine the coal region at Western Port for her Majesty's government, dated November, 1840, will indicate the nature of the mineral found in this part of Australia:—

"Upon my arrival at Western Port, I commenced to examine minutely the several seams of coal which presented themselves superficially, lying to the eastward of the bay, which I found situated at such an angle of depression as to be wholly unworkable.

"There were four veins of coal, which were more or less associated with a soapy clay, sandstone, and greystone, and which varied in thickness from one inch to nearly three feet. Upon combustion, these coals emitted a very strong and fierce heat, depositing heavy bases, bearing a yellowish tinge or cast. From the tossed and shattered appearance of those several veins, an indication is manifested of the close affinity of some extensive dyke-fault or trouble, as dislocations in the coal strata are technically denominated.

"Having traced the coal measures throughout the

direction of Cape Patterson, about twelve miles to the eastward of the port, I discovered various straggling open seams (termed the crops) of coal, varying in quality and thickness from two inches to four feet, and lying at such an angle as to be rendered available for mining. Here, as in Western Port, the coal is associated with greystone, sandstone, &c. In some, however, of the veins, the coal is of excellent quality, possessing a considerable proportion of bitumen, which would render it especially desirable for the purposes of gas, for exportation to Sydney, or for consumption at the towns of this province hereafter, when the public convenience of gas shall be introduced.

"The lofty and precipitous character of the rocks upon the coast exposed to view a section of strata which induced me to advance some miles farther than the strict line of my instructions directed. On approaching towards that part of the coast which inclines towards Cape Liptrap, I found the coal strata increased in thickness and regularity; but, from an accident which occurred to me at this period, whilst prosecuting my researches, I was precluded from following up my observations with a close examination. These were, nevertheless, sufficiently justificatory of my suggestion, that, in any future search for coals, this portion of the district should be minutely examined. The increased thickness and regularity of the measures strongly indicate, though not positively, the association of more extensive beds or seams of coal."

Mr. surveyor Smythe, who explored the south-east coast from Point Urquhart to within about fifteen miles of Cape Otway, says that extensive veins or seams of coal commence at a point thirty miles from the Port Phillip heads, and dip in every direction, the general bearing being north-north-west and south-south-east. The mineral seems to abound over a considerable extent of country. It is described as "in large seams of four feet in thickness, extending from 400 to 600 feet in length; as burning well, with little or no smoke, and leaving a fine white ash, resembling the purest description of cannel coal."

SOIL.—An earth formed of decomposed lava has in every country been found to possess extraordinary fertility. In the West Indies, in Sicily, and other countries, where volcanoes are in full activity, the inhabitants brave the dangers of the burning lava, on account of the richness of the surrounding region. A large part of the territory between Melbourne and Portland (nearly 200 miles) is of the dark chocolate-coloured soil, peculiar to a volcanic country; it is not surprising, therefore, to hear of wheat attaining a height of seven feet, and yielding sixty to seventy bushels per acre; oats, ninety bushels per acre; maize, 100; and other crops an equally valuable return for the labours of the husbandman. To the west-

ward of Geelong, for a distance of nearly 200 miles, there is an almost continuous succession of whinstone and other allied rocks, affording the basis of a soil which usually characterizes a rich agricultural country. Over this extensive region the extinct volcanoes give a picturesque variety to the well-grassed plains, the clumps of timber upon hill and dale, and the long lines of gum trees that mark the courses of the winding creeks. This country is being rapidly occupied.

Mr. Malcolm, an extensive settler and stockowner in Australia, in his evidence before a committee of the New South Wales Legislative Assembly, in 1845, stated that he had travelled extensively in England and Scotland, and had seen large tracts of land in the Port Phillip province as rich as any he had seen in Great Britain. The district of Lake Colac, for about 200 miles, is "as good land as ever plough was put in." There are thousands of acres adjoining Lake Colac clear of timber. Keeping the south side of the lakes, the country, all the way from Colac lake to Port Fairy, Portland Bay, and the Glenelg river, is a fine grazing country; a great part of it is too rich for sheep. The land north of the lakes is said not to be so good; but still well adapted for stock.

In the splendid country between Geelong, Lake Colac, and the Glenelg river, there is a soil unsurpassed in point of fertility. The tracts suited for cultivation are not confined to the banks of rivers or creeks, but extend generally in all directions, and the rains being regular, and the country not subject to drought, the pasturage throughout the year is perfectly sufficient to feed stock without artificial food, and to produce fat cattle, unsurpassed in any other part of the world.

In the district of Lake Colac, and around Mount Leura, there is much land, of which the natural pasture would maintain a bullock an acre all the year round; whereas the best land in Somersetshire, England, is allowed to be only capable of sustaining a bullock and a sheep for seven months, the animals being stall fed during the other five.

The richness of the soil is seen in its vegetation; Dr. Clutterbuck says that the daisy, buttercup, and the pretty but inodorous violet, are seen everywhere; the *Flora* are exceedingly beautiful, and, in the spring, literally carpet the ground; the wild geranium, a diminutive plant bearing a tiny pink flower, grows abundantly; two most lovely creepers are found growing in every

variety of soil—one bears a brilliant scarlet flower not unlike the laburnum in shape, the other has tufts of a blue colour, resembling the double violet; the balmy perfume of the golden and silver wattle (the mimosa tribe) is exhaled far and near; the brunonia, bearing a flower in colour like ultramarine, in many places covers the surface with "nature's most exquisite embroidery;" the musk plant and hyacinth are indigenous; the English pelargonium and fuchsia blossom throughout the greater part of the year; and European vegetables and fruits attain a size "which would excite astonishment in the mind of a Covent-garden fruiterer."

In most parts of the district finely open and undulating ground is to be found, adapted to the wants of the grazier and agriculturalist; in very many a rich black soil from eight to twelve inches in depth prevails, containing much decomposed vegetable matter with an argillaceous soil. Where this occurs, the valleys are composed of extensive, verdant, and fertile flats of vegetable mould. In some situations the soil is red, in others, a clayey hazel loam. The greater number of soils contain large portions of sand of various degrees of depth and fineness, and hence acquire the property of powerfully absorbing the rays of the sun. Admitting that some portions of the country are boggy, and a proportion sandy, rocky, and barren, yet, "millions of acres of good arable land are to be met with."*

CLIMATE.—The position of Victoria, to the southward of New South Wales, gives it a cooler climate than the more northern province. Fires are agreeable mornings and evenings, for eight months of the year. There is sufficient frost to freeze the surface of ponds for three or four days in winter (July), and snow falls occasionally on the low lands. The changes of temperature are occasionally rapid, but the "hot winds" are annually of brief duration. Port Phillip resembles, in its summer season, Baden, Marseilles, and Bordeaux; its winter, Palermo or Buenos Ayres; its fluctuations of temperature, those of Montpellier, and its annual mean is that of Naples. According to Count Strzelecki, the annual mean temperature of Port Phillip, is 61.3; mean for summer, 69.4; for winter, 53.3; summer maximum, 90.6; summer minimum, 48.8; winter maximum, 69.8; winter minimum,

* Port Phillip in 1849; by Dr. Clutterbuck, nine years resident in the colony.

36.9. *Warmest* month, November; *coldest*, July. The mean annual temperature is rather more than 61°, or about 12½° higher than the mean temperature of Croom's Hill, Greenwich, England. In the reading-room of the Mechanics' Institute, at Melbourne—fronting the south, and free of the sun—the thermometer, in the hottest summer, rarely exceeds 75° Fahrenheit. The summer evenings are in general clear and cool; the “hot wind” seldom has longer duration than one day; and the number of heated wind days in summer, is about twenty, of which, one-third are oppressively hot; but in a well-constructed brick or stone dwelling, with proper care to prevent the ingress of the heated draft of air, but little disagreeable sensation is experienced. For ten months

in the year, says Mr. Westgarth, the climate is unexceptionable; “the dryness and genial warmth of the air afford an almost daily access to the open country, and there appears, in the general buoyancy of the population, a degree of enjoyment of existence far beyond what is usually exhibited in the duller climes of the fatherland.” In the western parts of the province, where Tasmania does not intercept the breezes and clouds from the great southern ocean, the temperature is lower, and the annual quantity of rain greater than at Melbourne. For the following table I am indebted to Mr. Westgarth, a merchant at Melbourne, who has materially contributed by his writings to the advancement of the province which he has adopted as his home:—

Meteorological Register for Melbourne, 1845–6, 130 feet above the level of the sea; lat. 38° 18' S.

Months.	Thermometer.			Barometer.			Rain.		
	8½ A.M.	2¼ P.M.	Wet Thermometer.	Highest.	Lowest.	Mean at 2¼ P.M.	Number of Days.	Inches fallen.	Maximum in one day.
July . . . 1845	50.29	55.48	53.25	30.43	29.55	29.98	16	5.50	1.81
August . . . "	—	57.38	53.77	30.22	29.48	29.72	—	1.36	—
September . . . "	56.10	63.50	59.66	30.45	29.52	30.05	9	1.27	0.76
October . . . "	58.83	65.38	60.77	30.24	29.62	30.00	10	2.34	1.12
November . . . "	61.70	69.00	64.53	30.08	29.50	29.78	15	3.99	1.42
December . . . "	65.03	73.09	66.74	30.10	29.61	29.82	3	0.17	0.11
January . 1846	66.19	73.48	66.41	30.10	29.66	29.36	5	2.12	1.01
February . . . "	63.85	72.32	65.67	30.23	29.61	29.83	6	1.67	1.13
March . . . "	61.83	68.74	63.09	30.19	29.66	29.92	6	1.30	0.92
April . . . "	57.13	64.20	60.30	30.20	29.55	29.89	11	2.27	0.35
May . . . "	50.64	56.12	54.54	30.30	29.54	29.91	17	3.79	1.02
June . . . "	48.90	54.70	52.56	30.31	29.70	30.09	11	1.20	0.32

Note.—No Thermometrical return obtained for August at 8½ A.M.

The “hot winds” generally commence about the middle or end of November, and recur, at intervals, throughout the summer, until towards the end of February. At Melbourne, the hot wind has a N.N.W. direction during the summer; but the winds from the same quarter, in winter, are cold. During the prevalence of the hot winds, the sky is generally cloudless: the warmth materially abates after sunset. The scorching blasts are succeeded by a strong breeze from the southward, which occasions a fall in the thermometer of twenty to thirty degrees. During winter, snow sometimes covers the ground to the depth of three inches, and ice is formed of the thickness of a shilling. It will be observed, that more rain falls at Melbourne than in London. By means of the Australian Alps any desirable degree of cold may be obtained even in summer.

The climate of Victoria, as well as that of New South Wales, is occasionally deteriorated by a disease known as “*catarrh*,” which breaks out in some localities among the sheep, and will destroy in three or four weeks, four or five thousand sheep in a flock. There does not seem to be any mode of checking the disease; and when it occurs, the flock-master has to resort to the “boiling down” system. The “scab” and “foot rot,” also cause mortality in sheep, and there are stringent colonial laws to prevent the disease called “scab” spreading; sheep are prohibited being driven on the common roads, except in the month of February; notice must be given of the disease; and other stringent regulations must be adopted, subject to penalties of £10 to £20 for neglect. Licensed butchers are liable to be fined for slaughtering or exposing for sale infected sheep.

CHAPTER III.

POPULATION—EDUCATION—RELIGION—GOVERNMENT AND INSTITUTIONS.

POPULATION has been extraordinarily augmented; the comparative progress of increase in the inhabitants is thus shown, between the years 1836 and 1850:—

Places.	1836.	1841.	1846.	1850.
Melbourne, city. . .	—	4,479	10,954	15,000
Country districts . .	224	7,259	21,921	35,000
Total	224	11,738	32,875	50,000

Note.—The population for 1850 is only estimated.

The *nationality* shows that, of the total population in 1846, there were born in the colony, 3,855 males, 3,728 females; in England, 7,407 males, 2,693 females; in Wales, 83 males, 38 females; in Ireland, 5,037 males, 4,089 females; in Scotland, 2,757 males, 1,468 females; in other British dominions, 800 males, 603 females; in foreign countries, 245 males, 76 females. Total, 20,184 males, 12,695 females=32,879. The *classification of occupations* shows in commerce, trade, &c., 2,254; agriculture, 1,722; grazing—management, of sheep, 4,666; of horses and cattle, 1,334; horticulture, 178; other labourers, 2,673. Mechanics and artificers, 3,635; domestic servants, 1,201 males, 2,136 females; clerical profession, 29; legal ditto, 96; medical ditto, 106; other educated persons, 476. All other occupations, 1,983. Residue of population, 25,232. The *civil condition* in 1846 was, free-born in the colony, or arrived free, 17,553 males, 12,488 females; other free persons (meaning thereby those who had formerly been prisoners), 2,363 males, 202 females. *Bond*, holding tickets of leave, 230 males, 5 females; in government employ, 18 males; in private assignment, 20 males.

The prison population had its origin in the circumstance of the Port Phillip province being a district of New South Wales. The inhabitants have been very strongly adverse to the introduction of convicts, and recently the superintendent, Mr. Latrobe, was necessitated to prevent the debarkation of prisoners from two ships which had been despatched direct from England with convicts who had gone through a large probationary period in penitentiaries in the United Kingdom. The

feeling evinced against the introduction of criminals, however great may have been their alleged reformation, was quite as strong as that exhibited by the inhabitants of the Cape of Good Hope. By this time (June, 1850) there is, most probably, no trace in Victoria province of the convict system.

We have no returns of the number of the aborigines within the limits of the province. Their respected "Protector," Mr. Robinson, during various journeys, found on the banks of the principal rivers a comparatively dense aboriginal population. There are several mixed breed, or "half castes," of both sexes.

According to the census of 1846, the white population was thus distributed:—

County or District.	Males.	Females.	Total.
Bourke County . . .	9,440	7,890	17,330
Grant " . . .	2,359	1,531	3,890
Normanby " . . .	1,455	812	2,267
Gipps Land District .	612	240	852
Murray " . . .	1,142	416	1,558
Western Port " . .	2,516	1,009	3,525
Portland Bay " . .	2,675	798	3,473
Total	20,199	12,696	32,895

The key, with numbers attached to the excellent map of Mr. Ham, published at Melbourne in 1847, gives the names of the landed proprietors, and of the squatters in each division. In *Bourke county* the number of proprietors was then 69; in *Grant county*, 72; in *Normanby county*, 72; in *Western Port district*, 192; the *Murray district*, 149; *Wimmera district*, 67; *Portland Bay district*, 232; and *Gipps Land*, 44. Mr. Ham adds a district which he terms the *Tumut district*, between the Murray river and the Murrumbidgee, but this region belongs to the territory of New South Wales.

Melbourne city is divided into four wards; in 1846 each ward was thus tenanted:—

Name of Ward.	Males.	Females.	Total
Gipps	1,738	1,602	3,340
Bourke	976	929	1,905
Lonsdale	1,481	1,176	2,657
La Trobe	1,557	1,495	3,052
Total	5,752	5,202	10,954

Of the population of the city of Melbourne in 1846, there were—born in the colony, or arrived free, males, 5,551; females, 5,161: other free persons—males, 218; females, 38. *Bond*—holding tickets of leave, males, 18; females, 1; in government employment, males, 7.

The town population, irrespective of Melbourne city, is now increasing, and affords a

good indication of augmenting prosperity. The various eligible positions on the coast, and on the interior rivers for maritime and military stations, will cause an equable diffusion of wealth and civilization over the province

The following table shows the population, by ages, throughout the province:—

Abstract of the Population on the 2nd March, 1846, in each of the Counties and Commissioners' Districts.

Counties.	Males.					Females.					Totals.		General Total.
	Under 7 Years.	7 and under 14.	14 and under 21.	21 and under 45.	45 and upwards.	Under 7 Years.	7 and under 14.	14 and under 21.	21 and under 45.	45 and upwards.	Males.	Fe-males.	
Bourke	2518	962	538	4843	579	2495	917	680	3512	287	9440	7891	17331
Grant	515	153	135	1377	159	500	152	148	680	51	2339	1531	3870
Normanby	182	98	61	935	79	283	91	45	369	24	1455	812	2267
Total	3315	1213	734	7155	817	3278	1160	873	4561	362	13234	10234	23468
<i>Commissioners' Districts, beyond the Limits of Location.</i>													
Gipps Land	98	32	36	390	50	81	24	19	107	9	612	240	852
Murray	169	40	31	810	92	139	32	30	205	10	1142	416	1558
Portland Bay	275	80	72	2117	133	289	50	27	418	15	2677	799	3476
Western Port	354	135	116	1726	188	367	86	52	463	38	2519	1006	3525
Total	896	287	255	5043	469	876	192	128	1193	72	6950	2461	9411
Total Population .	4211	1500	989	12198	1286	4154	1352	1001	5754	434	20184	12695	32879

Abstract of the Population on the 2nd March, 1846, in the City of Melbourne, and in each Town and Village.

Towns and Villages.	Males.					Females.					Totals.		General Total.
	Under 7 Years.	7 and under 14.	14 and under 21.	21 and under 45.	45 and upwards.	Under 7 Years.	7 and under 14.	14 and under 21.	21 and under 45.	45 and upwards.	Males.	Fe-males.	
Melbourne (city)	1,561	617	331	2,959	286	1,608	592	480	2,346	174	5,754	5,200	10,954
Ashby*	28	6	—	43	2	26	6	5	30	4	79	71	150
Belfast*	36	8	5	89	13	40	5	7	63	3	151	118	269
Brighton*	117	28	9	106	12	65	38	16	111	7	272	237	509
Brunswick*	23	10	5	38	9	23	9	9	31	7	85	79	164
Geelong (North)	111	35	40	380	28	107	45	43	180	13	594	388	982
Geelong (South)	48	20	7	101	12	70	19	18	85	8	188	200	388
Irishtown*	28	4	2	34	3	23	4	7	29	1	71	64	135
Newtown*	53	6	5	59	4	44	14	11	57	3	127	129	256
Portland	68	26	8	163	13	80	35	13	100	4	278	232	510
Richmond*	62	20	8	82	13	74	30	14	93	6	185	217	402
Williamstown	45	14	8	93	12	58	9	11	70	2	172	150	322
Total urban Population	2,180	794	428	4,147	407	2,218	806	634	3,195	232	7,956	7,085	15,041

Note.—The mark (*) attached to the name of any town or village, indicates that it is situated on private property.

The population, by ages, of the province was:

Years of Age.	Males.	Females.
Under 7	2,689	4,154
7 and under 14	1,500	1,352
14 " " 21	989	1,001
21 " " 45	12,198	5,754
45 " " 60	1,122	393
60 and upwards	164	41

In 1846, the population in the following towns is thus shown:—

Name of Town.	Males.	Females.	Total.
Geelong	1,149	916	2,065
Belfast	359	242	601
Portland	278	232	510
William's, about	—	—	250
Alberton "	—	—	100

Proportion of married to single in 1846:—

Counties and Districts.	Married.		Single.	
	Males.	Fem.	Males.	Fem.
COUNTIES:—				
Bourke	3,264	3,383	6,196	4,507
Grant	716	696	1,623	835
Normanby	—	—	—	—
DISTRICTS:—				
Portland Bay	402	403	2,273	395
Western Port	506	474	2,011	534
Murray	224	222	918	194
Gipps' Land	107	114	505	126
TOWNS:—				
Melbourne	2,107	202	3,665	3,000
Geelong	274	256	507	333
Portland	101	99	177	133
Belfast	101	107	251	135

Note.—There are no returns for Normanby.

The total married was—males, 5,564; females, 5,656: unmarried, males, 14,620; females, 7,039. *Bond* population in 1846: holding tickets of leave, males, 230; females, 5: in government employment, males, 18; in private assignment, males, 20 = 268.

Religious denominations.	1841.	1846.
Church of England	6,190	14,921
" Scotland	2,044	5,856
Wesleyan Methodists . . .	650	1,597
Other Protestant dissenters	346	1,169
Roman Catholics	2,441	9,075
Jews	57	117
Mahomedans and Pagans .	10	27
Other persuasions	—	117

In 1847 the province was divided into sixty-nine parishes.

Number of houses in 1841 and 1846:—

Year.	Stone or Brick.	Wood.
1841	450	1,040
1846	1,835	3,363

The number shingled, i.e. roofed with small pieces of wood, was, in 1846, 3705; and of slated, 76. The number of houses finished was 4,547; unfinished, 651; inhabited, 5,070; inhabited, 128.

There is an abundance of the necessaries of life, and great comfort among all classes of the people. Dr. Clutterbuck, the most recent authority on the state of the colony (1849), in evidence of the condition of the working classes there, points "to the cottage of the mechanic or daily labourer, each surrounded by his family of children; on the breakfast table are seen a large dish of rump-steak, or mutton chops, eggs, fresh butter, excellent bread, and tea or coffee; the dinner table is equally bountifully supplied, the cup

foaming with colonial ale, being a never-failing accompaniment, tea and a substantial supper succeed. Think of these things, ye suffering poor at home. Fancy yourselves also strolling in the bush, and arriving at a station where, on some occasions, you see fore-quarters of mutton lying about in a state of putridity, and ask yourselves the question—'whence this shameful waste of the bounties which God has given?' and obtain the reply of the master—'our men refuse to eat this portion of the animal, and owing to the scarcity of labour we are compelled to submit to their dictation.'"^{*}

The weekly rations allowed to shepherds or hut-keepers consist of flour, 10 lbs.; meat, 12 lbs.; tea, $\frac{1}{2}$ lb.; sugar, 2 lbs. It is computed that the cost of maintenance for a man is five shillings per week. The duty of the *hut-keepers*, of whom there is usually one to each flock, is to shift the hurdles daily, prepare the daily meals for the shepherds, and watch the sheep by night from a little "crib box." One shepherd usually attends 1,000 sheep; but in an open country one man may have 1,500 or 2,000 confided to his care. According to Dr. Clutterbuck the current rate of wages, in addition to rations, given by squatters in 1849, was—shepherds, £20 to £25; hut-keepers, £18 to £22; bullock drivers, £24 to £28; married couples, with a family, £25 to £30; ditto, without encumbrance, £34 to £40; single females, £16 to £20; wheelwrights, £25 to £30; carpenters, £30 to £40 sterling per annum. Farm servants, 10s. per week; sheep shearers, 10s. to 13s. for every 100 sheep; or without rations, 15s. per 100 sheep. The town rates of wages are—female cooks, £18 to £24; men ditto, £20 to £28; housemaids, £16 to £18; nurses, £12 to £16; grooms, £25 to £32; laundresses, £20 to £28 sterling per annum. Charwomen, 2s. 6d. to 3s.; and needlewomen, 1s. per day. Washing, 2s. 6d. to 3s. per dozen.

Retail Prices of various Commodities.—

Beef and mutton 2d., veal and pork 5d. to 6d., bacon 8d. to 1s., tea 1s. 6d. to 3s., sugar (fine moist) 3d. to 4d., butter 10d. to 1s. 2d., cheese 7d. to 8d. per lb.; ale (colonial), 5d. per quart; bottled ale and porter (English), 10s. to 12s. per dozen; flour (fine) £10, seconds £9, per ton; wheat, 3s. to 5s. per bushel; potatoes, 3s. to 4s. per cwt.; milk, 4d. per quart.

In the year 1840, flour was sold for £90 per ton; bread, 2s. 6d. the quartern loaf;

^{*} *Port Phillip* in 1849, p. 108. London: 1850. Parker, West Strand.

butter, 3s. per lb.; cabbages, 6d. each; potatoes, 1s. per lb. Dr. Clutterbuck says that at this period he employed labourers, in the erection of a house, at a cost of 15s. per day each; but then he adds, "port and champagne were among the ordinary luxuries of the artisan."

EDUCATION.—According to the decision of the governor of New South Wales respecting education, it was ordered, on the 24th of September, 1841, that in towns or places of which the population amounts to 2,000 or upwards, local government aid be given for education, to any school, at a rate not exceeding one penny each day for the actual attendance of every child in the school, whose parents or friends are in such a station of life as to render it necessary to extend to them the assistance of government. Where the population does not amount to 2,000, the aid afforded may be as high as one penny farthing per diem, or one penny halfpenny, if there be no other receiving aid from government within five miles. The government aid cannot exceed the sum raised for the support of the school from private sources, nor be in excess of £25 per quarter, unless the number of children attending the school, or the poverty of their parents, be such as to make a special exception in favour of it necessary.

School inspectors, appointed by government, visit the different schools in their respective districts at uncertain times, but never less than twice in every month, muster the children, and compare the numbers present with the numbers entered on the registers of daily attendance kept by the masters or mistresses of the schools. The inspectors report to government any irregularity or misconduct which may fall under their notice. Police magistrates act as inspectors of schools. Quarterly lists are required by the government from each school, containing the names of all children who attend the school, their ages, and also the names, places of abode, trade or calling of their parents or nearest friends.

A diocesan grammar school has been recently established at Melbourne, through the instrumentality of the bishop. The annual fee is £10 10s.; entrance fee, £2 2s., and £1 1s. for every additional boy of the same family. The school is open to all persons without distinction, and the object is to give a sound scriptural and general education. There are also two private schools for girls, and two for boys at Melbourne.

There are about forty schools, with 5,000 pupils, in different parts of the province.

In 1846, the state of education, according to the census of that year, was as follows:—

State of Education.	Males.	Females.	Total.
UNDER 21 YEARS.			
Cannot read	4,005	3,863	7,868
Read only	1,052	1,138	2,190
Read and write . . .	1,643	1,506	3,149
ABOVE 21 YEARS.			
Cannot read	1,797	988	2,785
Read only	1,484	1,274	2,758
Read and write . . .	10,203	3,926	14,129

RELIGION.—The contrast between the earlier and present state of society, is very visible; a higher moral tone is gradually spreading in the community, and this improvement, in the estimation of many, dates from the arrival (in January, 1848) of the bishop, "one in whom are united the highest learning, humility, and piety." Heretofore the people at the distant stations in the interior, had existed in almost a heathenish state; the good bishop has ridden many hundred miles to exhort, and instruct, to celebrate the holy rites of baptism and confirmation, and to administer the blessed sacrament. His lordship was accompanied from England by three clergymen, has ordained four more since his arrival, and as fast as practicable, is locating ministers of the Gospel at eligible stations in the country. Prior to the arrival of the bishop (Dr. Perry, formerly district preacher of St. Paul's, Cambridge) only one clergyman had been appointed by government to superintend the Church of England in this large district. From 1840 to 1848, this zealous man (the Rev. Adam Compton Thompson) had to perform the whole of the duties, and has been known in *one day* to perform the burial service over six persons, the marriage ceremony for three couple, to baptize four children, and to visit the sick in Melbourne and its suburbs. It cannot be denied that grievous neglect has been evinced in this matter, for primary functionaries in a colony founded by a Christian people, before the appointment of judges, magistrates, police, and custom-house officers, ought to be the ministers of the Gospel.

The efforts recently made by the British government for the protection and instruction of the aborigines of Australia, is highly creditable. During the secretaryship of Lord Glenelg, the appeals of the London Aborigines Protection Society were received

with attention, and protectors were appointed to watch over, instruct, and if possible convert to Christianity the dark-coloured migratory races among whom we have established ourselves. The Port Phillip territory is divided into districts, in each of which is placed an assistant protector, and a medical officer, or assistant, with a homestead, and reserve of land, for the exclusive use of the aborigines. Agricultural operations are now carried on by the natives. Those who are able are expected to give an equivalent for what they receive; the sick, aged, and young children are rationed. A missionary is appointed to each establishment, an overseer to superintend agricultural operations, and a constable, to keep order. The salary and allowances of the protector-in-chief are £600 per annum. The salary of the assistant-protector is £250 per annum, and ten shillings and sixpence a day allowance. They are to travel among and sojourn with the native tribes, and by every means in their power endeavour to induce them to adopt a settled mode of existence. They are required to furnish statistical and other information connected with the native tribes of their respective districts; the boundaries and aboriginal names of districts occupied by each tribe, the differences of language, customs, and habits, the names of mountains, lakes, rivers, and other localities; a census distinguishing the number of each family, name, age, sex, tribe, and chief of tribes, whether warrior, councillor, or elder, &c. The Port Phillip province is divided for the above-named purposes, into four districts, viz., the Goulburn River, Mount Macedon, Portland Bay, and Western Port, or Melbourne district. At the homestead on the Goulburn river, 110 miles from Melbourne, the aborigines had, in 1842, cut down, grubbed up, and burned 450 acres; cleaned and broken up for cultivation, about twenty acres; and obtained good crops of wheat, oats, and barley, and about two tons of potatoes. They have built good houses for the assistant protector, medical officer, and overseer, and constructed huts for themselves. The women manufacture baskets, mats, string, &c.

The *Newspaper Press* of the province is coeval with the formation of the settlement, for a newspaper seems nearly as essential to an Englishman as the air he breathes.

The first newspaper, in 1836, appeared in manuscript; the enterprising projector, however, quickly obtained from Van Diemen's Land the requisite materials wherewith to

print it, and it appeared under the title of the *Port Phillip Patriot*. In the early part of 1837, the *Port Phillip Gazette* was issued, edited by Mr. Arden; and soon after a third appeared, styled the *Port Phillip Herald*. Each of these journals was issued bi-weekly, by which arrangement the colonists had even then the opportunity of having a newspaper on their breakfast tables every morning. Four newspapers are now issued at Melbourne daily (Sundays excepted), namely, the *Morning News*, *Daily News*, *Patriot*, and *Argus*. At Geelong the *Advertiser* is issued daily, and the *Victoria Colonist* I believe weekly. These papers are as large as the *Globe* or *Standard*. The copy of the *Argus* before me (Vol. ii. No. 106, July 11, 1849) contains fifteen columns of advertisements. The "editorials" of those papers, their "original correspondence," poetry, and selected articles, typography, and paper, place them on a par with the journals of the United Kingdom, except the leading metropolitan newspapers. The price of these daily Port Phillip papers is fifteen shillings per quarter, or sixpence for a single copy; for advertisements, six lines and under, three shillings, for every additional line three pence. The Portland district has three ably conducted newspapers, two printed and published at Portland and one at Port Fairy. A *Port Phillip Magazine*, and other periodicals, still further attest the rapid extension of the "fourth estate," whose progress is indeed unequalled in any other portion of the British Empire.

GOVERNMENT.—Under the provisions of the bill now before Parliament, Victoria will have a government appointed by the crown, and a Legislative Assembly similar, in constitution, to that of New South Wales, and the other Australian colonies. It is uncertain whether any alterations will be made in this bill in the House of Lords; and therefore it is unnecessary to give any other details than those already given. (See p. 550.) It is understood, that her Majesty's ministers do not now propose to vest the control of the waste or crown lands in the Australian legislatures, which conforms to the opinion I ventured to express in the published division of this work on New South Wales. (See p. 554-5.)

The *Laws*, are the same as in England; and administered, as in New South Wales, by a judge and supreme court.

INSTITUTIONS.—Several charitable, religious, literary, and benevolent societies, such



Engraved by J. G. Kneller.

HORATIO, VISCOUNT NELSON

OB. 1805.

FROM THE ORIGINAL BY HOPNER IN

HIS MAJESTY'S COLLECTION.

as have been described in the previous colonies. Among other associations, may be mentioned a Mechanics' Institution at Melbourne, and another at Geelong; an Auxiliary Bible Society; a Theological Education Society; Temperance Society; Harmonic Society; Union Benefit Society; Independent Order of Odd-Fellows; a Commercial Exchange; an Auction Company; Fire and Marine Insurance Company; Port Phillip Steam Navigation Company; public hos-

pital, &c. The *Port Phillip Bank* was wrecked in the general disasters of 1842-3. The proprietary of the Port Phillip Bank, in 1840-1, elected me a London director, and I recommended a course of procedure which met the approval of their intelligent agent in London, Mr. Gardiner, but it was not followed in the colony. There are branches of the *Union Bank of Australia*, and of the *Bank of Austral-Asia*, which are stated to be conducting a profitable business.

CHAPTER IV.

PRODUCTS—WOOL, LIVE STOCK, TALLOW, PRESERVED MEAT, WINE, FLAX, TIMBER FISH, &c.—COMMERCE—IMPORTS—EXPORTS—REVENUE—EXPENDITURE—LANDS—EMIGRATION AND SQUATTING INTERESTS.

PRODUCTS.—The first in value, and present importance, as in New South Wales, is wool. The quantity imported into the United Kingdom, from Port Phillip and Portland Bay, since 1846, previous to which period many of the Port Phillip and Portland Bay wools were shipped for England, *via* Van Diemen's Island, was in 1846, 20,956; 1847, 27,876; 1848, 37,351; 1849, 45,348 bales. The bales average about 280 lbs. each. The exports of wool from Victoria province to the United Kingdom, in 1849, amounted to 12,697,440 lbs. The total imports of wool into the United Kingdom for the same year, were 298,444 bales, of which Port Phillip and Portland Bay contributed nearly one-sixth part. Sydney sent 50,584; Van Diemen's Island, 17,926; South Australia, 10,400; Western Australia and New Zealand, 1,474 bales. The total exports of wool from the Austral-Asian settlements during the past year, consisted of 125,732, or nearly one-half the entire importations into the United Kingdom; while, in 1812, only *three* bales were imported from Australia. The progress of the wool trade is so remarkable—the augmented importation has such an important influence on one of the largest branches of English manufacture—on the domestic comfort of the people—on the extension of our foreign commerce, and on the increased employment of shipping, that I am induced to give the following statement of the quantities of wool imported from our various colonies, and from different

foreign countries, for the past half century, and for which I am indebted to the respected wool brokers, Messrs. C. and I. D. Jacomb, of Basinghall-street, London. It will be observed, that the imports from Spain and Germany, our former great sources of supply, have materially decreased of late years, while the production of our colonies has largely and steadily increased.

The augmented supply has reduced the price of all wools; Port Stephens fleeces, that a few years since fetched 5s. to 6s. a pound, do not now bring more than 2s. In the London price currents the Australian wools are distinguished by the words—Sydney, Port Phillip, Van Diemen's Land, Adelaide, Swan River, and New Zealand, to represent the different colonies. The usual classification of the qualities of the wool, and the range of price will be seen in the following extract from the London sales for May, 1850, of wools from Port Phillip, which, although improving, are still inferior to the Sydney wools, but superior to those from Van Diemen's Land, or from Adelaide:—Extra flocks, in first-rate condition, 1s. 8d. to 1s. 11½d. per lb.; good flocks, in fair condition, 1s. 6d. to 1s. 8d.; average do., 1s. 3½d. to 1s. 6d.; ordinary and ill-conditioned flocks, 1s. 2d. to 1s. 3½d.; scoured clothing, 1s. 6d. to 2s.; scoured lambs', 1s. 7d. to 1s. 10½d.; handwashed and ordinary skin, 1s. 1d. to 1s. 4½d.; lambs' good, 1s. 6d. to 2s. 2d.; lambs' inferior to average, 1s. 2d. to 1s. 6d.; locks, broken, &c., 10d. to 15½d.; in grease, 8d. to 1s.

618 WOOL IMPORTED INTO THE UNITED KINGDOM, 1796—1850.

Importation of Wool in Bales into the United Kingdom during the following years.

Years.	Sydney.	Van Diemen's Land.	Port Phillip.	South Australia.	W. Australia & N. Zealand.	Cape.	East India.	German.	Spanish.	Portugal.
1796	—	—	—	—	—	—	—	41	16,699	412
1797	—	—	—	—	—	1	—	394	24,330	69
1798	—	—	—	—	—	—	—	622	10,219	541
1799	—	—	—	—	—	—	—	2,342	14,752	6,366
1800	658	—	—	—	—	—	—	1,170	30,318	9,622
1801	1,302	—	—	—	—	85	—	598	26,989	5,015
1802	353	—	—	—	—	146	—	1,217	28,237	2,751
1803	18	—	—	—	—	78	—	680	21,778	1,280
1804	164	—	—	—	—	7	—	62	34,962	230
1805	1,203	—	—	—	—	—	—	67	34,298	1,113
1806	564	—	—	—	—	—	—	1,953	27,228	1,666
1807	74	—	—	—	—	7	—	548	61,458	1,645
1808	128	—	—	—	—	10	—	225	9,808	170
1809	14	—	—	—	—	3	—	1,753	21,418	5,385
1810	83	—	—	—	—	15	—	2,221	2,976	16,772
1811	9	—	—	—	—	11	—	102	12,951	9,946
1812	3	—	—	—	—	10	—	—	10,735	25,970
1813	—	—	—	—	—	—	—	—	—	—
1814	70	40	—	—	—	9	—	9,807	33,622	13,953
1815	151	92	—	—	—	11	—	8,964	24,649	6,351
1816	47	—	—	—	—	10	—	8,047	14,795	2,876
1817	—	—	—	—	—	20	—	13,761	31,418	4,699
1818	255	170	—	—	—	22	—	24,092	43,803	6,582
1819	170	150	—	—	—	27	—	12,827	27,664	9,046
1820	213	180	—	—	—	29	—	14,609	17,681	475
1821	421	281	—	—	—	58	—	24,615	34,845	592
1822	347	207	—	—	—	77	—	31,786	29,972	626
1823	1,001	908	—	—	—	32	—	35,892	21,595	5,668
1824	972	519	—	—	—	43	—	44,035	25,104	2,459
1825	914	380	—	—	—	33	—	82,284	41,032	4,769
1826	2,905	1,525	—	—	—	175	—	30,219	8,097	2,665
1827	696	567	—	—	—	54	—	60,630	19,495	2,258
1828	3,087	3,209	—	—	—	51	—	62,901	19,043	1,644
1829	3,746	3,608	—	—	—	50	—	40,314	18,777	266
1830	3,998	4,005	—	—	—	—	—	74,496	8,218	2,319
1831	5,792	5,804	—	—	—	263	—	60,782	22,675	—
1832	6,313	4,170	—	—	—	360	—	55,185	13,684	—
1833	8,908	6,040	—	—	—	511	—	72,776	20,714	—
1834	10,327	5,952	—	—	—	647	—	62,553	19,339	—
1835	12,737	7,025	—	—	—	824	1,397	69,632	8,582	2,772
1836	14,055	8,728	—	—	—	1,716	3,493	90,450	20,451	—
1837	19,564	10,754	—	—	—	1,812	5,663	53,359	11,011	2,151
1838	21,950	10,250	—	—	—	1,996	6,117	79,320	8,577	2,694
1839	22,944	14,638	—	1,524	—	3,247	5,674	68,682	11,730	4,753
1840	25,820	11,721	—	3,484	—	3,477	7,611	63,278	5,273	1,569
1841	30,280	13,937	—	8,798	—	4,191	10,563	62,483	5,287	2,716
1842	26,668	13,922	—	12,307	—	6,521	11,876	47,510	3,118	1,887
1843	37,255	14,948	—	14,957	—	7,734	6,594	53,495	2,715	1,680
1844	38,077	15,126	—	17,705	—	8,659	6,741	70,305	5,682	6,341
1845	37,825	16,839	—	22,815	—	13,765	10,065	61,777	5,188	3,267
1846	39,112	13,656	20,956	5,994	1,686	11,626	11,279	52,922	4,809	3,274
1847	41,927	16,503	27,876	7,133	853	13,566	8,123	41,396	1,956	3,005
1848	46,612	16,095	37,351	9,827	1,056	13,409	16,923	48,478	403	2,922
1849	50,584	17,926	45,348	10,400	1,474	20,345	11,041	45,839	516	4,420
1850	—	—	—	—	—	—	—	—	—	—
1851	—	—	—	—	—	—	—	—	—	—
Average weight.	About 280 lbs.						3 Cwt.		1 to 2 Cwt.	

Note—There are no returns for the year 1813, owing to the London Custom House records being destroyed by fire—From 1833 to 1838, inclusive, separate Returns were not kept of Wool importations from the ports of Port Phillip, South Australia, Western Australia, and New Zealand; and from 1839 to 1845, inclusive, many of the Wools belonging to these colonies were shipped via Van Diemen's Land.

WOOL IMPORTED INTO THE UNITED KINGDOM, 1796—1850. 619

Importation of Wool in Bales into the United Kingdom during the following years.

Years.	Russian.	Italian.	Turkey, Syria, Egypt, &c.	Peruvian, Sheeps', and Alpaca	Buenos Ayres and Cordova.	United States.	Danish.	Sundries.	Goats'.	Total Bales.
1796	21	7	8	17	—	—	7	32	—	17,244
1797	19	41	42	—	—	—	5	380	—	25,281
1798	—	—	—	—	—	—	—	130	—	11,512
1799	—	30	28	1	—	—	—	320	—	23,839
1800	25	84	76	—	—	—	14	473	—	42,440
1801	—	198	187	73	—	—	—	221	—	34,668
1802	1	186	174	210	—	—	—	1,326	—	34,601
1803	241	940	880	126	—	—	112	700	—	26,833
1804	482	627	605	24	—	—	205	230	—	37,598
1805	728	126	101	132	—	—	257	121	—	38,146
1806	207	60	58	110	—	—	57	64	—	31,967
1807	1,048	54	52	307	—	—	305	334	—	55,832
1808	27	130	124	407	—	—	6	22	—	11,056
1809	267	515	508	1,069	—	—	85	811	—	31,828
1810	868	683	676	601	—	—	207	142	—	25,244
1811	29	351	345	447	—	—	4	11	—	24,206
1812	259	6	4	261	—	—	92	12	—	37,352
1813	—	—	—	—	—	—	—	—	—	—
1814	1,031	426	421	112	—	—	307	3,801	—	63,599
1815	876	296	292	274	—	—	250	3,950	—	46,156
1816	699	262	257	1,308	—	—	220	1,476	—	29,997
1817	582	179	178	956	—	—	125	5,636	—	57,554
1818	1,666	1,015	1,051	2,358	—	—	510	10,850	—	92,374
1819	1,580	1,494	1,507	174	—	—	484	3,800	—	58,923
1820	150	334	380	25	—	—	20	1,459	—	35,555
1821	185	8	17	52	—	—	42	1,836	—	62,952
1822	554	5	10	32	—	—	170	4,356	—	68,142
1823	400	2	4	11	—	—	208	2,142	—	67,363
1824	631	377	395	852	—	—	220	2,236	—	77,843
1825	5,362	1,430	1,452	1,054	—	—	897	5,055	—	144,692
1826	1,650	534	547	5,068	—	—	320	1,189	—	54,894
1827	2,607	846	872	556	—	—	372	2,543	—	91,496
1828	2,706	425	434	929	—	—	715	1,214	—	96,358
1829	1,664	8	17	70	—	—	321	818	—	69,659
1830	1,680	14	29	64	—	—	323	3,672	—	98,818
1831	348	—	—	318	—	—	—	1,389	—	97,371
1832	997	—	—	2,445	—	—	—	639	—	83,793
1833	4,114	1,112	—	1,913	—	—	1,241	3,351	—	120,680
1834	6,910	4,761	14,983	8,498	—	—	1,547	760	—	136,277
1835	9,134	2,816	6,660	10,064	—	—	1,175	2,295	—	145,113
1836	15,072	3,754	14,714	16,653	—	—	4,488	14,762	—	208,336
1837	15,116	3,314	8,421	30,030	—	—	1,059	591	—	162,847
1838	8,826	4,434	4,249	30,378	—	—	1,388	1,593	—	181,772
1839	17,847	5,197	8,039	37,854	—	—	1,232	2,108	—	205,469
1840	11,776	4,055	5,492	40,000	—	—	2,199	320	—	186,079
1841	10,825	3,949	2,095	55,190	—	—	2,714	354	5,621	219,003
1842	14,199	573	1,439	19,956	—	—	1,475	358	5,967	167,776
1843	10,181	546	1,854	36,129	—	—	33	383	3,667	192,771
1844	16,984	5,310	9,564	24,565	—	—	424	3,684	5,165	234,332
1845	21,008	7,145	8,249	41,878	6,135	4,699	1,637	2,843	6,142	271,277
1846	11,451	4,247	12,520	56,574	1,076	2,440	1,408	1,560	5,231	261,811
1847	7,055	3,194	7,983	56,652	4,578	1,544	942	1,510	7,023	252,819
1848	7,402	1,502	6,272	56,438	6,463	139	678	1,067	5,468	278,505
1849	16,681	1,998	5,278	43,143	5,785	975	1,366	2,071	13,258	298,444
1850	—	—	—	—	—	—	—	—	—	—
1851	—	—	—	—	—	—	—	—	—	—
Average weight.	3 Cwt.	Various.	84 lbs.	4½ to 8 Cwt.	Various.	1½ to 2 Cwt.	—	—	—	—

Note.—Until the year 1845, the Wool imported into Great Britain from Buenos Ayres, Cordova, &c., was entered in the Custom House returns as South American, with the return of Peruvian; and the Goats' wool imported to the year 1840, inclusive, was entered as from Turkey, Syria, Egypt, &c. The Peruvian sheep and Alpaca wool is in ballots of 84 lbs. each.

It will be seen that the total number of bales imported in each year, from every country, from 1796 to 1849 inclusive, is given in the last column of this page.

Had we been dependent on foreign countries for the raw material of this staple branch of British industry, our foreign and domestic trade would have been crippled, not only by insufficient supplies, but by high prices. Estimating the imports for the year 1850 at about 300,000 bales, (or 70,000,000 lbs.), nearly two-thirds of this quantity will be supplied from our transmarine territories in Australia, at the Cape of Good Hope, and in British India. I confidently look forward to a large progressive increase of this valuable branch of trade; for if we calculate the population of the United Kingdom at thirty million, it is not an unreasonable allowance to allot six lbs. weight of woollen garments annually to each individual, if they could be cheaply obtained. This would require a supply of 180,000,000 lbs. of wool yearly, for domestic use alone. Mr. McCulloch estimates the entire produce of British and Irish wool at 500,000 packs, of 240 lbs. each = 120,000,000 lbs.: the home and colonial wools would therefore be only equal to the wants for domestic consumption, and leave nothing for the export of woollen manufactures to our colonies and to foreign countries, a trade which is now carried on to the extent of nearly £7,000,000 sterling annually, and is still capable of great increase, as light woollen fabrics are as conducive to health in warm climates, as stout fleecy garments in cold regions.

I adverted, in the history of New South Wales, to the great national importance of the wool trade; but there are some other facts connected with this ancient branch of traffic and manufacture, which deserve a record in this work, in connection with the valuable staple product of our Austral-Asian settlements. For this collection of data, I am indebted to Mr. Henry Burgess, one of the best-informed practical men in England. The rise and progress of the growth and manufacture of wool is associated with the advancement of society in Europe, and even in some parts of Asia, but especially in this kingdom; and the welfare of the Australian settlements has been so materially forwarded by it, that the following summary of its history, though almost too lengthy for these pages, may not be considered wholly inappropriate:—

"It is recorded of Phemius, the step-father of Homer, that he taught letters and music to the youth of Smyrna, and received wool in exchange for his instruction. The plain of Damascus supplied large quantities of wool for the manufactures of Tyre

in the palmy days of Phœnician enterprise, and when purple and fine linen ranked among the choicest articles of commerce. Colchis in Thrace, Laodicea in Phrygia, also produced wools of superior quality, and a portion of the latter was naturally of a fine jet black. Ireland, at one time, had numerous flocks of a similar breed. But Miletus, the Lord Western of his time, is stated to have produced in Caria, wool preferred to all others. Pliny speaks of wool being brought from a great city north of the Ganges, probably in Thibet, or Nepal, by way of Bactria, also to supply the manufactures of Western Asia; it was from these sources of supply, the material was obtained for the manufacture of those costly fabrics, which, when dyed with Tyrian purple, conferred such celebrity on the commerce of Phœnicia. After the decline of the Tyrian manufacture, it appears to have planted itself in Italy; Padua and Modena having, in their turn, become celebrated for their woollen fabrics.

"Spain, antecedent to, or about the commencement of, the Christian era, had also attained celebrity for its woollen manufactures, and at that time exported largely. Soon after Cæsar's time Britain produced wool in great abundance, and in Anno Domini 314, great fairs for wool were held several times in the year at York, London, and Colchester. It was about the middle of the tenth century when the woollen manufacture established itself on an extensive scale in Flanders, and from that time to the commencement of the twelfth century, the bulk of the wool produced in Britain appears to have been exported to the former country, and to such an extent, that it became proverbial that all the nations in the world were clothed with English wool made into cloth by the Flemings. An extensive inundation of the Low Countries about the end of the eleventh century, having caused a number of Flemings to seek refuge in England, there they met with a favourable reception, and gave the first characteristic impetus to the woollen manufacture therein; so that by 1189 it had become extended over the greater part of England. At this date guilds of weavers had been established in London, Huntingdon, Lincoln, Nottingham, Winchester, Oxford, and York, all paying fines to the king for their corporate privileges, and licences were also granted to dealers in several large towns. In the thirty-first of Henry II. (1185) the weavers of London obtained a confirmation of their charter, in which it was directed, that if any weaver mixed Spanish wool with English, in making cloth, the chief magistrate should burn it. In 1216 it is stated that the breed of sheep had greatly increased, and that, although the exportation of wool was still very considerable, the manufacture of cloth had also progressively increased, and that large quantities of cloth in the grey unfinished or undressed state, were also exported; and in which state a good deal of cloth was also worn in England; it appearing that up to this time very little progress had been made in the art of dyeing, although we find the duties on wool amounting to £593 12s. 1d. in a single year. In 1261 the barons enacted "that the wool of England should be manufactured at home, instead of being sold to foreigners, and that all persons should wear woollen cloth made within the kingdom, and avoid every superfluous extravagance of dress." How far this restrictive and sumptuary enactment was carried into effect, does not distinctly appear, but we find that in 1266, new regulations were enacted in respect to levying of duties on wool exported. In

1298 the king, by letter, directed that all wool and wool-fells of the counties of Bedford, Buckingham, Derby, Cambridge, Huntingdon, Warwick, Leicester, Rutland, and Norfolk, should be shipped at Lynn; Newcastle, Hull, Ipswich, Southampton, Bristol, and London, being also other ports for the exportation of the same. It was in 1327 the king granted a patent in favour of the manufacturers of worsted stuffs in Norfolk; and in 1331, great inducements were held out to Flemish manufacturers to immigrate into England. In 1337 an act was passed, making it felony to carry any wool out of the kingdom, and at the same time, all persons, except the king and his family, were interdicted from wearing any cloth of foreign manufacture, on pain of arbitrary punishment; this enactment, however, appears to have been preparatory to the king (Edward III.) constituting himself the Mehemet Ali of that day, for we find him, immediately after, contracting for 20,000 sacks of wool, and for some years subsequent, the great wool-stapler of England, entering into and concluding negotiations with Flanders and other foreign parts, for the supply of wool, and for the year 1354, we find the following very circumstantial account of the exports and imports, viz. :—

Exports.

Quantity.	Value.	Customs.
31,651½ sacks of wool, at £6 .	£180,909	} £81,624
3,036 cwt. (120 lbs.) of do. £2	6,072	
65 wool-fells, 21s. 8d. . . .	1	
hides	89	
4,774½ pieces of cloth	9,549	} 216
8,061½ „ of worsted stuffs	6,718	
Total Exports	£212,338	£81,847

Imports.

Quantity.	Value.	Customs.
1,831 pieces of fine cloth . . .	£10,986	£98
397½ cwt. of wax	795	20
1,829½ tuns of wine	3,659	183
Linens, mercery, grocery . . .	22,944	286
Total Imports	£38,384	£587

“ By 1357 the king appears to have become tired of trading, for in this year, English as well as foreign merchants, were permitted to export wool and wool-fells, to any country in amity with the king. About this time the woollen manufactures of Ireland had acquired great celebrity. The Catalonians, at this period, appear to have enjoyed the highest repute in Europe for their fine woollen fabrics, but were, at the same time, buyers of the stuffs called *serges*, manufactured by the Irish, for re-sale in Florence, where it is stated the luxury of dress was carried to the greatest height. A passion for what is termed luxury in dress, appears at this period to have become general over a great part of Europe; for we find that, in 1363, a sumptuary law was passed by the parliament of England, prescribing the kinds of cloth to be worn by the different classes of society. From 1363 to the close of the century, various regulations were enacted respecting the fulling, and the sale and exportation of both wool and cloths; and, although in the year 1391, the exportation of wool

is stated to have been much less than usual, the customs on it amounted to £160,000, over and above tonnage, poundage, aulnage, pellage, &c. In the same year, Guildford, in Surrey, is spoken of as the centre of an extensive manufacture, where the cloths had fallen into disrepute, consequent on the defective fulling and undue stretching. In 1399, cloths of certain descriptions, and below a certain value, should be exempt for three years from the charges of sealing and duty, for the ease of the poor.

“ In 1421 the following statement was presented to the king, as the proceeds of revenue for the year ending Michaelmas, 1420, viz.—

Customs on wool	£3,967	1	2
Subsidy on ditto	26,035	18	8
Small customs	2,436	9	1½
12 pennies in the £ on value of goods } exported, £164,750 15s. 10d. }	8,237	10	9½
Casual revenue	£40,676	19	9½
	15,066	11	1
Total revenue	£55,743	10	10½

“ In 1429 it was ordained that, for the profit and wealth of England, the prices of wool and wool-fells should be raised, and that they should be sold to the merchants of Genoa, Venice, Tuscany, Lombardy, Florence, and Cata'onia, for gold and silver only. In 1449, English cloths were prohibited in Brabant, Holland, and Zealand, which being judged contrary to the existing treaty, and found very distressing to the men weavers, fullers, and dyers, and the women websters, carders, and spinners, and all others concerned in the trade, it was resolved in parliament, that if the Duke of Burgundy did not repeal the injurious ordinance, no merchandise of the growth or manufacture of his dominions should be admitted in England. In 1463, the parliament, considering that the wool of England was the principal commodity of the kingdom, and desirous of promoting the industry of the people and the prosperity of the towns, prohibited foreigners from buying or shipping any wool, wool-fells, morlings, or shorlings, from England or Wales, except from the four northern counties, and the districts of Alverton and Richmond, in Yorkshire, and thence they were allowed to be shipped from the port of Newcastle only. In 1497, it is stated that woollen cloth was one of the greatest commodities of England, and that Henry VII. concluded a commercial treaty with the Archduke Philip, wherein it was stipulated that the woollen goods of England should be received in the Netherlands without paying duty; yet such appears at all times to have been the caprice and uncertainty resulting from the manufacturing mania, that, in 1530, we find foreign merchants, as well as English manufacturers, withdrawing from England, inasmuch that the woollen manufactures very much declined, and foreign cloth was sold cheaper than the English, by which means much land was turned into sheep-walks for supplying the Netherlands with wool.

“ In 1534, an act of parliament (25 Hen. VIII., c. 13) represents the practice of engrossing farms and diverting land from tillage to the support of vast numbers of sheep, as an evil lately sprung up, and that some have 24,000, some 20,000, some 10,000, to 5,000 sheep, whereby a good sheep, that used to be sold for 2s. 4d. to 3s. at most, is now

sold for 6s., or 5s., or 4s., at least; and a stone of wool, which used to be sold for 1s. 6d. or 1s. 8d., is now sold for 4s. or 3s. 4d., at least, &c., which things tend to the decay of hospitality, the diminishing of the people, and to the let of cloth-making, whereby many poor people have been accustomed to be set on work; for remedy it was, in substance, enacted, that none shall keep above 2,400 sheep (exclusive of lambs), and no man should hold above two farms.

"In 1537, or thereabout, it is stated that the woollen manufacture was introduced at Halifax, in Yorkshire, and that, besides the largeness of its parish, which contained eleven chapels and about 12,000 people, nothing is so admirable as the industry of the inhabitants, who, notwithstanding an unprofitably barren soil, have so flourished by the cloth trade, that they are become very rich, and have gained a reputation for this above their neighbours.

"In 1550, sixty vessels cleared from Southampton with wool for the Netherlands, so great (it is observed) was the demand for the woollen manufactures of that country, even when England had made a considerable progress in the same manufacture.

"In 1552, the English company of merchant-adventurers, who had had for the forty-five preceding years the sole command of the British commerce, had reduced the price of English wool to 1s. 6d. per stone; in the preceding year they had exported 44,000 woollen cloths of all sorts, while all the English merchants together had, in the same year, exported only 1,100 cloths.

"In 1580, the commerce between England and the Netherlands is represented to have attained a great height, the export of draperies from England amounting to 200,000 pieces, and the aggregate export to £2,400,000, to the great benefit, it is said, of both countries, neither of which could possibly (without the greatest damage) dispense with, of which the merchants on both sides were so sensible that they fell into a way of insuring their merchandise from losses at sea by a joint contribution. *This then appears the period of commencing the practice of maritime insurance.*

"In 1567 the city of Norwich is spoken of as having recovered from the desolating effects of Ket's rebellion in 1549, and that its manufacture of fine and light stuffs had become famous all over Europe, and that the Flemings, about this time, introduced into that part of the country a taste for floriculture; this is also the period when Colchester, in Essex, was the centre of extensive manufactures of baizes, serges, and other light worsted fabrics.

"In 1582, the Hanseatic League (the German League of the present day) complained to the Diet of the empire that by the high duty laid on woollen cloth in England it had become twice or thrice as dear as it had before been, whereby the vast increase of England's wealth, 200,000 cloths being yearly imported from thence. The only remedy was to banish the English merchant-adventurers out of the empire, and absolutely to prohibit all manner of English woollen manufactures. The complaints of the League prevailed with the Diet, who passed sentence against the English merchants, and absolutely prohibited all English woollen goods. Notwithstanding the prohibition by the German Diet, it appears that in 1603 a duty of £1 13s. 4d. was levied on every sack of wool exported by aliens, and the same for every 240 wool-fells, and by proclamation the exportation was afterwards prohibited, which indeed, it is said, it was

high time to do, the English manufacture of it being now too considerable, and so much sent into foreign parts as to employ or work up all, or nearly all, our own wool at home.

"In 1608 it is stated that the English were but little skilled in the arts of dying and dressing their own woollen cloths, and therefore usually sent them white into Holland, where they were dyed and dressed, and then sent back to England for sale. It is surprising that those who made the finest cloths in the world could not finish them, but the fact was really so. Alderman Cockayne, and some other merchants, reflecting on the great profit thereby made by the Hollanders, proposed to the king to undertake the dying and dressing of cloths at home, to the great profit of the public and his Majesty; whereupon the alderman obtained an exclusive patent for it, and the king was to have the monopoly of the sale of such dyed cloths. The king thereupon issued a proclamation prohibiting any white cloths to be sent beyond sea, and seized the charter of the Company of Merchant Adventurers, which empowered them to export white cloths. In retaliation the Hollanders and Germans prohibited the importation of all English-dyed cloths; from this period the manufacture appears to have struggled with alternations of success and the reverse for a great length of time.

"In 1630, King Charles is stated to have confirmed his father's proclamation against the exportation of wool, wool fells, and woollen yarn, upon pain of confiscation, &c., for the encouragement of the woollen manufactures, and ordering that for the better utterance of cloth within the kingdom all black cloths and mourning stuffs at funerals should be only of the wools of the kingdom, and the false dying of cloths and stuffs being a great hindrance to their vent, none should therein use any logwood or blackwood. The prohibition of the exportation of wool was further confirmed by parliament in 1647; and in 1660 it was further enacted that no live sheep, wool, or woollen yarn should be exported on pain of forfeiture thereof, and of the ships or vessels attempting to carry the same, and also a penalty of 20s. for every sheep, and 3s. for every lb. of wool, and three months' imprisonment for the master of such sheep, 12 Car. II., c. 22. In 1662 several additional enactments were passed more rigidly prohibiting the exportation of wool. In 1666, 18 Car. II., c. 4, it was enacted, for the encouragement of the woollen manufactures of England, 'that no person should be buried in any shirt, shift, or sheet, made of, or mingled with, flax, hemp, silk, hair, gold, or silver, or other than what shall be made of wool only, upon forfeiture of £5 to the poor of the parish, towards a stock or work-house for their employment. In the following year, 1667, great improvements in dyeing and finishing of the cloth took place in consequence of the immigration of some workmen from Flanders. In 1685 an influx of refugees from France brought with them considerable improvements in the manufacture of fine worsted stuffs. In 1688-9 great complaints prevailed against the rivalry of the woollen manufactures of Ireland; at the close of the century the total exportation of woollens from England was as follows, of which two-thirds were exported from the port of London, viz:—

1698	£3,120,615
1699	2,932,292
1700	2,989,163
1701	3,128,365

and at the three following periods the value of all

woollen manufactures and worsted stuffs exported was, viz. :—

Period.	Value in £.	Period.	Value in £.	Period.	Value in £.
1718	2,673,696	1738	4,168,643	1772	4,436,783
1719	2,730,297	1739	3,218,273	1773	3,875,929
1720	3,059,049	1740	3,056,720	1774	4,333,583
1721	2,903,310	1741	3,669,734	1775	4,220,173
1722	3,384,842	1742	3,358,787	1776	3,868,053
1723	2,920,601	1743	3,541,558		

and for the ten years, 1790—1799, the amount annually exported averaged £5,392,744. In an appendix to the evidence taken by a committee of the house of lords in 1828, is a statement showing the proportion of short and long wool grown in each county of England, which represents the quantity in 1800 to have been 325,000 packs, and in 1828, 384,500 packs of 240 lbs. each = 92,260,000 lbs. : this is for England only, and to which Wales and Scotland are to be added.

The machinery of England and Scotland is capable of working up an almost indefinite quantity of wool; its manufacture is, I believe, one of the most steadily profitable branches of our national industry.

The production of the raw material, also, is found remunerative in England, Spain, Saxony, and other countries. Capital invested in an Australian sheep run is considered to return at present about twenty per cent. The most highly-prized to breed from are Lord Western's, the Saxony, and pure Merinos. Saxony rams, recently imported at Melbourne, sold privately for thirty guineas each. October and November are the shearing months; and soon after that time ships begin to load for England. The wool from Victoria is annually improving.

The average weight of a Port Phillip sheep is 60 lbs.; each sheep is computed to yield a clip of 24 lbs. of wool (or 3 lbs. on rich pasturage), and the average weight of tallow obtained from each animal by boiling down, is 26 lbs. The price in February, 1849, at Melbourne, was 4s. to 5s. per sheep. Rough serviceable horses sold at the same period at prices varying from £4 to £14 sterling each; horned cattle at 25s. to 30s. per head.

The large Leicestershire breed of sheep in Australia weigh about 140 lbs. each, and yield 6 to 7 lbs. of wool. The Saxon breed yield a much finer wool, and have a small carcase. Dr. Thompson had, however, a pet Saxon wether, which weighed 150 lbs, and whose fleece weighed 10½ lbs. In general the yield of the fleece at Port Phillip is 4 lbs. from a sheep at maturity (five years), but every subsequent year the weight of the fleece decreases. Much de-

pends on the state of the pasture; if the soil be too rich, or too sandy, the teeth of the sheep wear away quickly, and if not consigned to the butcher they would perish of inanition. The coarse, hardy Leicester sheep is not so liable to the catarrh, or foot rot, as the more pure-blooded Saxon or Merino.

LIVE STOCK were first imported into the province, as previously stated, in 1836. Their numbers have rapidly increased since that period, as will be seen from the following statistical return:—

Year	Horses.	Horned Cattle.	Sheep.	Swine.
1840	2,372	50,837	782,283	
1841				
1842				
1843	4,605	100,792	140,433	3,041
1844	6,278	167,156	1,602,798	—
1845	7,076	187,873	1,860,912	—
1846	9,289	231,602	2,449,527	3,986
1847	11,400	290,439	2,996,992	5,867
1848	—	—	—	—
1849	16,495	386,688	5,130,277	5,659
1850	—	—	—	—

Note.—There are no returns previous to the year 1840.

The "boiling down" system has been adopted in this province from necessity, as well as in New South Wales, though to a much less extent. The live stock slaughtered, and its produce, is thus shown:—

Year.	Boiling down Establishments.	Slaughtered.		Tallow produced.	Hogs slaughtered.	Lard produced.
		Sheep.	Horned Cattle.			
1845	4	10,950	2,784	Cwt. 4,344	29	lbs. 240
1846	3	7,007	982	1,994	—	—
1847	4	52,437	2,647	13,205	6	488
1848	7	120,691	5,545	27,725	2	200
1849	—	—	—	—	—	—
1850	—	—	—	—	—	—
Total						

In 1848, the live stock slaughtered in Melbourne, consisted of, sheep 37,787; horned cattle 6,667; pigs 1,475.

The average weight of tallow obtained from a sheep, is 26 lbs.

The expense of converting sheep into tallow, sorting and packing the skin, wool, &c., is about one shilling a sheep, which may be defrayed by boiling the pelt, hoofs, horns sinews, &c., into glue, of which each sheep will yield about four pounds weight. With regard to cattle, the *intrinsic* value of an ordinary four-year-old beast consists of 80 lbs. of tallow, at 32s. per cwt.; hide, horns, glue, bones, refuse, soup, and meat, 14s. 6d. = 40s.

There is a very extensive "boiling down" establishment, near Melbourne, belonging to Messrs. Watson and Wright, who have not only large steam boilers for obtaining the tallow from several animals at once, but also kilns for drying hams, manufactories for curing meat, a tannery, coopers, &c., all giving employment to a number of people. There are also similar establishments belonging to Messrs. Brodie and Cruikshank, and other enterprising individuals, who have established candle works and soap manufactories.

The Australian preserved beef, put up in air-tight canisters, is excellent, and well deserving the attention of the victualling department of her Majesty's navy, and of the owners of merchant ships.

I have recently partaken of a round of this meat, put up two years before in New South Wales, which was fit for any table in the kingdom; the flavour was good, and the nutritious qualities very great. The beef is of easy digestion, and would be well adapted for aged and young persons in England.

Mr. R. C. Dangar, of Billiter Street, London, has sent out to the colony a preserving apparatus, and properly instructed persons to prepare the meat. He has now obviated the defects that hitherto existed in the Australian meats, which rendered some of them unsaleable in England, and has introduced a valuable article of commerce. The quality of that now imported is at least equal, by some persons it is even deemed superior, to any of the meats preserved in England.

The admiralty require annually five hundred tons of preserved boiled beef for the crews of her Majesty's ships. A large part of this is, I believe, supplied from Wallachia and Moldavia; but it is to be hoped that encouragement will be given by government to the production of our own colonies. The use of this fresh meat in the British mercantile marine, once or twice a week, would be beneficial to the seaman and economical to the ship-owner; good salt beef for sailors now costs from 3d. to 4d. per lb., and each man is allowed one pound and a-half a day. Of this about fifty per cent. is lost in boiling and by weight of bone. One pound of Australian cooked fresh meat, *without* bone, would not cost more than the pound and-a-half of salt meat, and be far more nutritious and healthy for the men.

Several ship-masters have commenced the royal navy practice, and are using the fresh meat; and the certificates of the commanders of these vessels prove its capability of standing the test of any voyage, even when subjected to the trying temperature of the hold of a ship in the tropics. I used, while in China, some Australian beef gelatine, for the preparation of soup, and found it wholesome and palatable. In a few years, it is probable that the export of cured meats will be a large and profitable branch of business; and, as horned cattle are increasing with extraordinary rapidity, the supply may be said to be almost incalculable.

The cultivation of the grape has been successfully commenced in various parts of the colony, and promises well.

Year.	Acres of Vineyards.	Wine Made.	Brandy Made.
		Gallons.	Gallons.
1847	78	2,600	—
1848	101	1,300	30
1849	108	6,306	100
1850	—	—	—

The produce of the Swiss vineyards at Geelong is 1,000 gallons of wine per acre. Mr. Andrew Lang, justice of the peace of Dunmore, Hunter's River, had 1,200 gallons per acre. In both instances the beverage had the character of the Rhenish and Moselle wines. The tract of volcanic country to the northward of Melbourne is peculiarly adapted, by soil and climate, for the cultivation of the vine; and a large German immigration is expected, for the development of this useful product.

The common flax plant (*linum usitatissimum*) is indigenous to Australia. Towards the Glenelg river it covers a large tract of marshy land. On the Lower Darling river it is found in great abundance, and is used by the natives for cord or line-nets. The south-west part of Victoria province, and the north-east districts of New South Wales, would seem well adapted for the culture of flax, which is a thirsty plant, deriving nutriment from the air, rather than from the soil. It affords a very profitable crop, which, if properly dressed, always commands a market in Europe. The raw staples of flax, hemp, cotton, and silk, will doubtless be included, in course of time, among the valuable exports of Australia.

The *red gum*, or mahogany of the colonists, is now being exported to England: the texture is close and fine. Recently, a

vessel of 300 tons burden—the *Jane Cain*, was launched from the Melbourne wharf: she was elaborately finished; and her cabin exhibited specimens of nearly every kind of wood produced in the colony. The Cape Otway, and other neighbourhoods, present a great abundance of rare and useful timbers.

The fisheries of Port Phillip, as also those of the other Australian colonies, are as yet undeveloped. A fine fish, called “cod,” occasionally weighing upwards of ninety pounds, is numerous, and easily angled, in the rivers in the northern portion of the province. These fish are stated to be equal in flavour, though not in firmness, to their namesakes of Newfoundland. In February and March, large “schools” of herring frequent the coast. The real “Blackwall white-bait” may be taken in quantities in the bay of Port Phillip; also the schnapper, or bream, butter-fish, flatheads, lobster, or sea crayfish, and large shrimps.

Whales frequent the bays and harbours on the coast; Portland bay has been a favourite resort for the cetacæ during the calving season, and there is a lucrative fishery.*

The progress of the province is seen in the following tabular statement:—

Years.	Imports.	Exports.	Total.	Cus- tom duties.	Ves- sels out- wards.	Wool exported.
					Tons.	lbs.
1837	£108,939	£12,180	£121,119	£2,979	13,424	175,031
1838	71,061	20,589	91,650	6,735	11,679	320,393
1839	204,722	77,684	282,406	11,476	20,352	615,605
1840	392,036	154,650	546,676	27,306	34,177	1,704,861
1841	217,764	157,069	374,833	46,093	34,156	2,752,340
1842	194,510	197,912	392,422	54,973	34,146	3,331,395
1843	120,675	221,639	341,314	41,419	34,215	4,204,979
1844	158,863	242,801	401,664	36,451	—	4,828,735
1845	205,390	342,624	548,014	42,536	—	5,415,000
1846	315,571	425,201	940,772	37,852	—	6,406,950
1847	437,696	688,511	1,106,407	38,288	48,643	10,210,038
1848	373,676	675,359	1,049,035	52,270	55,094	10,524,663
1849	—	—	—	—	—	12,697,440
1850	—	—	—	—	—	—

Note.—From 1841 to 1845 the returns are for the years ending 10th October, which represent the annual progress of the colony better than the year ending 31st December, as that is the middle of the wool shipping season. The extensive transactions with Sydney are not recorded, the province having been a district of New South Wales.

* Some whale fishers at Peterhead, in Scotland, have disputed the accuracy of my statements under Newfoundland, as to the proportion of oil which each foot of whalebone generally represents. If the sample blade of whalebone, i. e. the largest of the laminae in the series, weigh seven pounds, the whalebone will weigh about a ton. The oil yielded generally, according to the measurement of the different lengths of whalebone is stated by Scoresby to be as follows:—Whalebone, 1 foot = $1\frac{1}{2}$ tons of oil; 2 = $2\frac{1}{2}$; 3 = $2\frac{1}{2}$; 4 = 3; 5 = 4; 6 = 5; 7 = $6\frac{1}{2}$; 8 = 8; 9 = 11; 10 = 13; 11 = 17; 12 = 21.

The progress of the export trade is thus shewn:—

Year.	United Kingdom.	British Possessions.	Total Value.	Total Tonnage Outwards.
1837	—	£12,180	£12,180	13,424
1838	—	20,589	20,589	11,679
1839	£26,654	51,030	77,684	20,352
1840	60,155	93,808	153,963	34,477
1841	94,431	81,704	176,135	34,156
1842	200,332	36,790	237,122	34,146
1843	266,650	41,316	307,966	34,215
1844	202,850	51,157	256,847	—
1845	576,551	86,946	463,957	—
1846	323,881	101,320	425,201	—
1847	566,417	101,494	688,511	48,643
1848	581,355	93,739	675,359	55,094

The following is the number and tonnage of vessels, inwards and outwards, engaged in the Geelong trade in the year ending October 10, 1849:—

Vessels.	Inwards.		Outwards.	
	No.	Tons.	No.	Tons.
Foreign . . .	174	12,659	76	11,347
Coasters . . .	149	7,534	141	7,848
Total . . .	223	20,193	217	19,195

Imports, £36,195; exports, £255,087; exclusive of goods removed coastwise; revenue collected, £9,256. Produce exported—wool, 5,684,903 bales; sheep, 9,976; horned cattle, 524; beef, 112 tons; hides, 637; horses, 2,400; tallow, 373 tons.

Among the imports, in 1848, were the following items:—Apparel, 1,607 kegs; gunpowder, 18,220 lbs.; shot, 22 kegs; beer and ale, 289,381 gallons; bricks (Bath and fire), 9,000; cocoa nuts, 2,000; coffee and chocolate, 505 cwt.; cottons, 527 bales; earthenware and china, 864 packages; glass, 1,017 packages; haberdashery, 1,329 packages; hardware and ironmongery, 6,420 packages; hats, caps, and bonnets, 168 packages; hosiery and gloves, 541 packages; instruments (musical), 28 packages; iron and steel, 872 tons; jewellery, 6 cases; lead, 29 tons; leather (unmanufactured), 72 packages; boots and shoes, 305 packages; machinery, 505 packages; nails, 898 kegs; malt, 465 bushels; oil (linseed), 626 gallons; oilcloth, 11 cases; oilman's stores, 3,615 packages; pepper and spices, 36,648 lbs.; perfumery, 4 cases; pipes (tobacco), 151 boxes; pitch, tar, and rosin, 654 barrels; plants and seeds, 241 packages; plate and plated ware, 4 packages; saddlery and harness, 244 packages; silks, 31 cases; slates, 19,174 number; soap, 232 boxes;

brandy, 50,345 gallons; rum, 52,552 gallons; gin, 15,769 gallons; whisky, 5,529 gallons; liqueurs, 53 gallons; stationery and books, 551 packages; sugar (refined), 992 cwt.; ditto (raw), 1,940 tons; tea, 302,840 lbs.; tin and tin-ware, 177 boxes; tobacco, cigars, and snuff, 179,506 lbs.; toys and turnery, 85 packages; turpentine and varnish, 70 cans; vinegar, 6,178 gallons; watches and clocks, 75 packages; wine, 60,476 gallons; wooden ware, 1,008 packages; woollens, 265 bales; &c.

Excepting tea, sugar, spices, and a few other articles, the whole of the above-mentioned goods, and others not enumerated, were from England, and amounted in real value to about £300,000. The exports for the present year to the Port Phillip district will amount, it is estimated, to half a million sterling; and to the Sydney district, about a million and-a-half sterling. Thus we export to a colony which is but the creation of yesterday, with a population of 250,000 inhabitants, an amount of goods nearly equal to one-half the total annual value of all our exports to France, with its thirty-six or forty million of inhabitants. At the close of this work, I hope to prepare a clear statement of the British trade with our maritime possessions, compared with that carried on with foreign countries, in order that a just estimate may be formed of the relative importance of our colonial and foreign trades; and lest the assertion made in Parliament, during the discussion on the Australian government bill, that the cost of our colonies to the home exchequer was equal to the trade we carried on with them, should be believed, it may here be stated that New South Wales and Port Phillip, as well as other colonies, *defray every shilling of their own expenditure*; and the troops stationed there might as well be withdrawn, for any protection they affords to the colonists. Excepting, therefore, the pay of these soldiers, New South Wales and Port Phillip not only meet their own charges, but remit yearly a considerable sum to her Majesty's treasury in London, to provide for the conveyance of the pauper labouring poor of the United Kingdom, who seek remunerative labour in that remote portion of the British empire.

The ignorance of the mere geographical position of our colonies is not restricted to parliamentary documents, where, among other errors, *Berbice* is designated as one of the islands of the *Bahamas*. Shippers

of goods should pay special attention to the geography of the ports to which they consign goods. For instance, two vessels sail from London as advertised for Port Phillip; but there are two harbours within this immense port; one called *Hobson's Bay*, which is the haven of the city of Melbourne; and the other *Geelong*, which is nearly fifty miles distant. Goods put on board a vessel bound to Hobson's Bay, Melbourne, but consigned to Geelong, will be exposed to risk, considerable delay, and additional expense, in their transit to their proper destination. Bills of lading should therefore be made out either for Hobson's Bay, Melbourne, or for Geelong, and shipped accordingly.

The custom duties levied at Port Phillip are of the same amount as those enacted for Sydney, New South Wales. Fifteen shillings per foot is charged on all vessels inward or outward bound as pilotage dues, besides harbour dues. One shilling per bale is charged for shipment of wool from Melbourne to Hobson's Bay (the shipping port), and 5s. per ton for general goods.

The rates of exchange are thus stated for January, 1839:—Bills on London at thirty days' sight purchased at one per cent. discount, one-half per cent. for every additional thirty days; on Van Diemen's Land at sight purchased at two per cent. discount. Drafts on London, at thirty days' sight, under £100, issued at three per cent. premium; on Sydney, at sight, issued at one per cent. premium; on bills having a currency of not more than 100 days, eight per cent. per annum; on bills beyond that currency, ten per cent. per annum.

The revenue and expenditure has been—

Years.	Revenue.		Total.	Expenditure.
	General.	Crown or Land.		
1837	£2,979	£3,712	£6,691	£2,164
1838	6,734	37,194	43,928	6,723
1839	11,475	60,889	72,364	27,854
1840	36,569	218,853	255,422	93,195
1841	81,673	78,417	159,000	167,339
1842	84,566	2,729	87,295	129,048
1843	67,066	10,508	77,574	—
1844	56,799	11,021	67,810	—
1845	66,531	23,687	90,118	51,725
1846	60,623	35,996	96,619	51,559
1847	66,892	68,049	134,942	65,758
1848	84,868	59,479	144,347	137,500

According to the *Melbourne Argus* of 18th May, 1847, the following was the financial state of the Port Phillip province for 1846:—

MORTGAGES ON LAND AND LIVE STOCK IN VICTORIA PROVINCE. 627

Receipts.—General revenue, £60,623; crown land revenue, £35,537; droits of the crown, £459 = £96,619.

Expenditure.—From general revenue, £34,695; schedule A, £5,200: schedule B, £1,769; schedule C, £3,325 = £50,768. Surplus revenue for 1846, £45,850.

The general and the land revenue is again increasing: for the quarter ending September, 1848, the general revenue was £18,180; ditto, 1849, £21,030. The land revenue for

the same period was, in 1848, £20,142; in 1849, £33,410. Total, 1848, £38,222; 1849, £54,441. The returns on this head are discrepant, as some include only the land sales, and others the depasturing licences.

The extent of mortgages on land, and of advances on wool and on live stock, are shown in the following statements, which are, in form, similar to the returns given under New South Wales:—

Number and Amount of Mortgages on Land, registered at Port Phillip, from the year 1837 to 1848 inclusive.

Year.	Mortgages on Town Lands.		Mortgages on Country Lands.		Mortgages on Town and Country Lands.		Totals.	
	No.	Amount.	No.	Amount.	No.	Amount.	No.	Amount.
1837	—	—	—	—	—	—	—	—
1838	16	£17,260	—	—	—	—	16	£17,260
1839	89	44,868	21	£32,595	—	—	110	77,463
1840	60	73,176	19	53,768	3	£7,500	82	134,445
1841	51	42,858	40	39,765	8	25,850	99	108,474
1842	95	56,090	57	40,301	10	16,870	162	113,261
1843	69	27,238	47	48,322	18	194,853	134	270,413
1844	45	17,831	20	29,317	3	1,510	68	48,658
1845	37	12,262	25	24,461	1	10,000	63	46,723
1846	45	14,702	25	21,034	—	—	70	35,736
1847	67	19,544	30	23,487	—	—	97	43,032
1848	97	33,433	40	36,395	4	1,900	141	728

Amount of preferable liens on wool, and of mortgages on live stock, in the colony of New South Wales, registered at Port Phillip,

since the passing of the act of Council, 7th Victoria, No. 3,—15th September, 1843, to 31st December, 1848, inclusive.

Year.	Preferable Liens on Wool.			Mortgages on Live Stock.				
	Liens.	Sheep.	Liens.	Mortgages.	Sheep.	Cattle.	Horses.	Lent.
	Number	No.	Amount.	No.	No.	No.	No.	Amount.
1843	9	37,910	£4,959	28	57,338	4,240	310	£24,131
1844	66	275,168	23,022	117	345,159	19,655	629	129,008
1845	37	168,793	11,784	71	149,536	8,175	136	44,383
1846	22	133,375	11,159	85	251,402	12,506	227	100,071
1847	43	294,202	33,790	125	539,924	22,252	480	135,907
1848	102	819,823	62,532	146	600,517	34,469	510	129,808

The liens are renewed every year, by advances on the *ensuing* clip of wool, and the same sheep may consequently be included in successive years. The mortgages of real estate are renewed every three years, on terms of mutual arrangement.

The number and description of the immi-

grants who arrived at Port Phillip during the year 1848, are shewn in the accompanying returns; but as the immigrants arriving in the Port Phillip district may readily pass into the New South Wales district, and *vice versa*, the return is given for both divisions of the province.

Return of the Assisted Immigration to Sydney and Port Phillip, during the year 1848.

	SYDNEY.							PORT PHILLIP.						
	—		Above 14 years.		Under 14 years.		Total	—		Above 14 years.		Under 14 years.		Total
	Male	Fem.	Male	Fem.	Male	Fem.		Male	Fem.	Male	Fem.	Male	Fem.	
Births on the passage.	42	44	—	—	—	—	86	36	30	—	—	—	—	66
Deaths on the passage	—	—	2	7	26	28	63	—	—	7	13	47	55	122
Number landed. . .	—	—	1514	1613	671	578	4376	—	—	1227	1306	513	463	3509
														7885

Note.—The average mortality was about 1½ per cent.

628 EMIGRANTS FROM ENGLAND, WALES, AND SCOTLAND TO N. S. W.

Return showing the proportions in which the Assisted Immigrants, who have arrived in the Colony during the year 1848, have been taken from the several counties of Great Britain.

England.	Landed in Sydney District.	Landed in Port Phillip District.	Wales and Scotland.	Landed in Sydney District.	Landed in Port Phillip District.
ENGLAND.			WALES.		
Northern counties:—			Carnarvonshire		
Northumberland	6	14	Denbighshire	—	—
Cumberland	3	4	Flintshire	2	—
Westmoreland	2	2	Merionethshire	1	—
Durham	16	5	Cardiganshire	—	—
Yorkshire	149	136	Montgomeryshire	2	3
Lancashire	88	64	Pembrokeshire	1	3
Isle of Man	4	—	Cardiganshire	7	—
Total	268	225	Brecknockshire	1	—
Southern counties:—			Glamorganshire	6	3
Kent	102	26	Anglesea	—	—
Sussex	46	10	Total	20	9
Surrey	66	23	SCOTLAND.		
Hampshire	47	6	Northern counties:—		
Wight I.	5	54	Caithness	3	5
Berkshire	48	13	Sutherland	—	24
Dorsetshire	32	81	Ross-shire	35	86
Wiltshire	192	210	Cromarty	—	—
Somersetshire	19	85	Nairn	—	—
Devonshire	177	285	Inverness-shire	50	152
Cornwall	42	—	Moray or Elgin	6	5
Guernsey I.	3	3	Banff	4	5
Jersey I.	3	—	Aberdeen	14	17
Alderney	1	—	Kincardine	1	—
Total	783	796	Forfarshire	12	15
Midland counties:—			Fifehire	32	32
Cheshire	8	—	Kinross	—	—
Derbyshire	27	2	Clackmannan	9	2
Nottinghamshire	160	34	Perthshire	29	36
Staffordshire	29	4	Orkney or Shetland Isles	6	3
Warwickshire	25	2	Isle of Skye	—	1
Worcestershire	28	—	Total	201	383
Leicestershire	62	9	Southern counties:—		
Rutlandshire	1	1	Edinburgh	19	28
Northamptonshire	99	42	Haddington	11	—
Buckinghamshire	215	124	Berwickshire	—	20
Oxfordshire	66	171	Roxburghshire	9	15
Gloucestershire	76	62	Selkirkshire	—	4
Monmouthshire	—	5	Peebles	1	—
Herefordshire	15	16	Lanarkshire	65	25
Shropshire	9	1	Dumfriesshire	14	11
Total	829	473	Galloway	—	2
Eastern counties:—			Ayrshire	48	94
Lincolnshire	55	40	Dumbarton	3	11
Norfolk	62	116	Argyleshire	97	59
Huntingdonshire	31	13	Renfrewshire	162	138
Cambridgeshire	41	83	Stirling	21	13
Suffolk	85	87	Linlithgowshire	—	14
Bedfordshire	59	56	Bute	2	—
Hertfordshire	37	11	Wigtonshire	9	5
Essex	30	10	East Lothian	3	2
Middlesex	200	64	Mid Lothian	1	—
Total	600	480	Total	458	441
Grand Total	2,480	1,974	Grand Total	679	833

Note.—The counties named are those of which the emigrants were natives.

IRISH PROVINCES FROM WHICH EMIGRANTS ARRIVED.

629

Return showing the proportions in which the Assisted Immigrants, who have arrived in the colony during the year 1848, have been taken from the several counties of Ireland.

Provinces.	Landed in Sydney District.	Landed in Port Phillip District.	Provinces.	Landed in Sydney District.	Landed in Port Phillip District.
IRELAND.			Ulster:—		
Leinster:—			Donegal	8	58
Longford	3	3	Londonderry	38	49
Westmeath	57	30	Antrim	127	20
Eastmeath	—	—	Fermanagh	5	12
Louth	8	1	Tyrone	62	10
King's County	62	11	Down	43	2
Kildare	8	—	Cavan	24	33
Dublin	33	12	Monaghan	21	6
Queen's County	—	2	Armagh	56	36
Carlow	5	5	Belfast	1	—
Wicklow	9	5			
Kilkenny	57	30	Total	385	226
Wexford	1	—			
Total	243	99	Munster:—		
Connaught:—			Clare	177	47
Leitrim	1	3	Kerry	2	—
Sligo	—	47	Cork	40	37
Mayo	1	27	Waterford	—	4
Galway	40	84	Tipperary	101	72
Roscommon	2	2	Limerick	92	46
Total	44	163	Total	412	206
			Grand Total	1,084	694

Note.—Between the amount of the totals of this and the preceding return, and the number of assisted immigrants shown in the return (p. 627), will be observed a difference of 141, which is composed of persons who were not born in the United Kingdom; but, with few exceptions, were the children of English parents who had been resident in France. The counties given are the *native* counties.

Return of Expenditure on Account of Assisted Emigration to Sydney and Port Phillip, during the year 1848.

	Sydney.	Port Phillip.	Totals.
Total Passage-money at the contract rate (including half-price for all above one year who died on the voyage)	45,806 12 8	37,287 17 2	83,094 9 10
Paid by the immigrants, or out of British funds	1,338 16 8	507 5 1	1,846 1 9
Paid out of the colonial emigration fund	44,467 16 0	36,780 12 1	81,248 8 1
Gratuities to surgeons, officers, constables, &c.	3,486 10 0	2,745 11 0	6,232 10 0
Total charged on the colonial fund for conveyance and superintendence	47,954 15 0	39,526 3 1	87,480 18 1

Note.—The average contract price for the conveyance of each adult passenger was £12 11s.

Ages of the Assisted Immigrants who arrived during the year 1848.

Age.	Where from.								Total.	Where landed.			
Years.	England.		Scotland.		Ireland.		Elsewhere.			Sydney.		Port Phillip.	
	Males.	Fem.	Males.	Fem.	Males.	Fem.	Males.	Fem.		Males.	Fem.	Males.	Fem.
Under 1	95	92	33	40	20	25	4	8	326	89	94	72	71
1 to 4	176	169	53	42	41	14	15	15	525	162	137	123	103
4 to 7	132	127	47	31	23	24	13	17	414	133	103	82	96
7 to 14	329	266	85	62	90	53	19	12	960	287	244	236	193
14 to 21	432	362	131	117	90	620	8	7	1,767	381	593	280	513
21 to 45	1,260	980	440	377	324	398	4	19	3,802	1,110	1,004	2,028	1,774
45 to 50	40	23	11	14	1	2	—	—	91	23	16	29	23
Total.	2,464	2,019	800	683	598	1,180	63	78	7,885	2,185	2,191	1,740	1,769

Number of Assisted Immigrants who arrived during the year 1848, who can read and write.

Age.	Where from.				Total.	Where landed.	
	England.	Scotland.	Ireland.	Elsewhere.		Sydney.	Port Phillip.
Under 4 years:—							
Cannot read . . .	521	166	107	42	836	471	365
Read only . . .	11	2	2	—	15	11	4
Read and write . . .	—	—	—	—	—	—	—
From 4 to 7 years:							
Cannot read . . .	148	39	39	18	244	138	106
Read only . . .	101	34	7	10	152	91	61
Read and write . . .	10	5	1	2	18	7	11
From 7 to 14 years:							
Cannot read . . .	56	11	43	4	114	63	51
Read only . . .	291	62	80	17	450	243	207
Read and write . . .	248	74	64	10	396	225	171
From 14 to 21 years:							
Cannot read . . .	45	8	222	2	277	109	168
Read only . . .	201	35	176	6	518	322	196
Read and write . . .	548	205	212	7	972	543	429
From 21 and upwards:							
Cannot read . . .	154	31	152	3	340	219	121
Read only . . .	508	125	188	1	822	468	354
Read and write . . .	1,641	686	385	19	2,731	1,466	1,265

Trades or Callings of the Adult Males and the Unmarried Adult Females who have arrived in the Colony as Assisted Emigrants, during the year 1848.

Trade or Calling.	Where from.				Total.	Where landed.	
	England.	Scotland.	Ireland.	Elsewhere.		Sydney.	Port Phillip.
Agricultural Labourers	1,146	296	332	■	1,782	969	813
Gardeners	46	15	4	—	65	38	27
Farm Bailiffs	6	—	5	—	11	11	—
Shepherds	43	114	14	—	171	77	94
Herdsmen	—	1	2	—	3	2	1
Domestic Servants	507	260	804	12	1,583	864	719
Carpenters	112	41	10	—	163	81	82
Masons	15	6	2	—	23	15	8
Quarrymen	5	1	1	—	7	1	3
Bricklayers	20	3	1	—	24	13	11
Brickmakers	19	6	—	—	25	20	5
Sawyers	13	8	—	—	21	16	5
Plasterers	1	—	—	—	1	—	1
Butchers	19	1	2	—	22	13	9
Bakers	7	13	—	—	20	12	8
Grocers	2	—	—	—	2	2	—
Millers	2	1	—	—	3	2	1
Brewers	1	■	—	—	3	1	2
Confectioners	—	1	—	—	1	1	—
Maltsters	—	1	—	—	1	1	—
Poulterers	—	—	1	—	1	1	—
Tailors	6	4	1	—	11	7	4
Shoemakers	6	2	1	—	9	5	4
Dressmakers	35	10	10	—	55	42	13
Bonnetmakers	4	—	—	—	4	4	—
Strawplaiters	2	—	—	—	2	2	—
Tailoresses	1	1	—	—	2	2	—
Embroideresses	—	—	1	—	1	—	1
Needlewomen	10	1	—	—	11	—	11
Smiths	104	34	8	2	148	90	58
Wheelwrights	18	7	6	1	32	19	13
Cabinet Makers	8	6	1	—	15	8	7
Porters	—	1	—	—	1	1	—
Printers	—	3	—	—	3	2	1
Shipwrights	1	1	—	—	2	2	—
Flax Spinners	—	1	1	—	2	2	—
Total	2,119	841	1,207	23	4,230	2,329	1,902

Religious Persuasions of the Immigrants who arrived during the year 1848.

Religious Denominations.	Where from.								Total.	Where landed.				
	England.		Scotland.		Ireland.		Elsewhere.			Sydney Dist.		Port Phillip.		
	Males.	Fem.	Males.	Fem.	Males.	Fem.	Males.	Fem.		Males.	Fem.	Males.	Fem.	
Ch. of England .	1,764	1,428	40	32	119	304	56	58	1,979	1,822	1,103	1,035	876	787
Ch. of Scotland .	21	21	604	513	44	89	—	4	669	627	335	329	334	298
Wesleyan Method	384	323	14	11	1	2	7	8	406	344	221	172	185	172
Other Protestants	266	224	115	103	4	1	—	—	385	326	197	171	188	155
Roman Catholics	23	19	27	26	430	784	—	8	480	837	324	481	156	356
Jews	6	4	—	—	—	—	—	—	6	4	5	3	1	1
Totals . .	2,464	2,019	800	683	598	800	63	78	3,925	3,960	2,185	2,191	1,740	1,769

To administer the consolations of religion, there are at Victoria ministers of different persuasions as follows:—church of England, one bishop and nine chaplains; church of Scotland, five chaplains; church of Rome, one bishop, and seven chaplains; Independents, Baptists, and Jews, one each. The salaries of the chaplains vary from £100 to £300 per annum.

Earl Grey has judiciously directed that aid be given for the transmission of female orphans of all religious denominations from the United Kingdom to Australia, and ordered that every practicable precaution be adopted for the safe conveyance of these friendless children, and for their protection on arriving in the colony.

At Melbourne, a building has been erected for their reception, and a similar committee to that formed at Sydney has been appointed there, consisting of the following members:—The Right Rev. the lord bishop of Melbourne; the Right Rev. Dr. Goold, Roman catholic bishop; Edward Curr, Esq., justice of the peace; the Very Rev. P. B. Geoghegan, Roman catholic vicar-general; the Rev. Irving Hetherington, minister of the Scots church at Melbourne; William Lonsdale, Esq., sub-treasurer; John Patterson, Esq., acting agent for immigration; Robert Williams Pohlman, Esq., barrister-at-law, and commissioner of the Insolvent Court; James Hunter Ross, Esq., solicitor; Andrew Russell, Esq.; James Simpson, Esq., commissioner of crown lands; the Rev. A. C. Thompson, incumbent of St. James', Melbourne. The plan has answered well, and many parentless children, who had no prospect before them, in Great Britain or Ireland, but penury, and perhaps a career of vice, have been placed in a position to become respected and opulent members of society in Australia.

The relative proportion of the population of the United Kingdom is—England, 59.6

per cent.; Scotland, 9.8 per cent.; Ireland, 30.6 per cent.

The number of emigrants sent out to New South Wales since the resumption of emigration, in 1847, has been—English, 14,088; Scotch, 3,638; Irish, 6,911; total, 24,637; being in the proportions of—English, 57.2 per cent.; Scotch, 14.8 per cent.; Irish, 20.0 per cent.

Of the Irish, 2,488 were orphan girls, who were taken as being a class well suited to the peculiar wants of the colony, and as being, for many reasons, the most eligible class of Irish emigrants that it was possible to select: they have, in general, given satisfaction in the colony. It is due to the Irish to state that they make excellent settlers in a young colony; the Celtic desire for the acquisition of land, and of thereby realizing an independence, forms an inducement to industry and frugality, which is attended with beneficial results; and many Irish who have landed without a shilling in Australia are now the owners of a considerable amount of property.

Those who are alarmed at the present deficiency of female population in Austral-Asia will have their fears removed, at least as regards the future proportion of the sexes, by the following statement, given on the authority of her Majesty's emigration commissioners. According to the latest returns, the male and female population of each of the Australian colonies was as follows:—

Colony.	Males.	Females.	Excess of Males.	Date of Return.
New South Wales:				
Sydney District.	92,389	62,145	30,244	} Census of 1846.
Port Phillip do.	20,184	12,695	7,489	
Van Diemen's Land	47,813	22,313	25,500	} Blue Book, 1848.
South Australia .	21,527	17,139	4,388	
Western Australia	2,818	1,804	1,014	
New Zealand . .	4,996	3,835	1,161	

The number of unmarried male and female emigrants sent to Sydney, Port Phillip,

and South Australia, since 1st of January, 1848, has been, to—Sydney, males 2,182, females 3,618; Port Phillip, males 2,160, females 3,094; South Australia, males 1,692, females 2,191.

It will be seen from these returns that, both in New South Wales and Van Diemen's Land, there now exists a considerable excess of males over females. A similar disproportion exists in Western Australia, and, to a less extent, in South Australia and New Zealand. But it is not likely that the three last colonies will absorb any considerable number of female emigrants at present. The outlet for this class of emigrants must be sought principally in New South Wales or Van Diemen's Land. In regard, however, to New South Wales, it is to be observed that the disproportion between the sexes is continually and rapidly decreasing. In 1836, the number of males and females in the colony was—males 55,539, females 21,557; being in the proportion of five to two. In 1841, the numbers were—males 87,298, females 43,558; being in the proportion of four to two. In 1846, the numbers were—males 112,573, females 74,840; being in the proportion of three to two. And a further analysis of the last census (that for 1846) will show more clearly both the cause of the existing disproportion and the rate at which it may be expected to right itself. Thus, in the population under twenty-one years of age, the number of males and females is very nearly equal; between twenty-one and forty-five, the proportion of males to females is not quite two to one; and, among those upwards of forty-five, not quite three to one. The actual numbers are—under twenty-one, males 40,071, females 39,779; twenty-one to forty-five, males 59,009, females 30,315; forty-five and upwards, males 13,493, females 4,746; total, males 112,573, females 74,840. It is evident, therefore, that in the course of a very few years, as the old convict population* dies off (and, excepting in 1849, no additions have been made to it by transportation for several years past), the disproportion of the sexes will disappear, even without any special measures for that object.

The average retail price of provisions and

* In Victoria, as well as in New South Wales, the leaven of a convict population, whose religious and moral instruction was neglected, have, in a comparative degree, caused a considerable amount of crime. The convictions in Melbourne, in 1848, were—murder, 1; manslaughter, 2; shooting, wounding, &c., 6; rob-

clothing in the district of Port Phillip, quarter ending 31st March, 1849, was as follows:—

Wheat, 4s. per bushel; bread, first quality, 2d.; second quality, 1½d.; flour, first quality, 2½d.; second quality, 1½d.; rice, 3½d.; oatmeal, 5d.; tea, 2s. 1d.; sugar, 3½d.; coffee, 11d.; sago, 9d.; fresh meat, 2d.; salt meat, 2d.; fresh butter, 1s. 3d.; salt butter, 1s.; English cheese, 1s. 3d.; colonial cheese, 7½d.; salt, 1½d. per lb.; potatoes, 8s. per cwt.; colonial wine, 6s.; imported wine, 15s.; brandy, 25s.; colonial beer, 1s. 10d.; imported beer, 3s. 6d. per gallon; candles, 5d. per pound; lamp oil, 2s. 9d. per gallon; soap, 5d. per pound; starch, 11d.; blue, 2s.; colonial tobacco, 2s. 6d.; imported tobacco, 4s. Moleskin jackets, 8s. each; moleskin coats, 14s. 6d.; waistcoats, 5s.; moleskin trousers, 7s. per pair; flushing trousers, 11s.; coloured shirts, 2s. 8d. each; strong boots, 12s. 6d. per pair; strong shoes, 10s.; shepherd's coats, 18s. each; socks, 10½d. per pair; handkerchiefs, 3d. each; straw hats, 5s.; print dresses, 6s.; merino dresses, 15s.; flannel petticoats, 7s.; calico petticoats, 2s. 10d.; stockings, 1s. 6d. per pair; shoes, 7s.; caps, 2s. 10d. each; shawls, 10s.; shifts, 3s.; stays, 6s. per pair; check aprons, 1s. each; straw bonnets, 4s.; flannel, 2s. per yard; calico, 7d.; blankets, 13s. per pair; sheeting, calico, 1s. per yard; mattresses, 10s. 6d. each; rugs, 5s.

Average Wages of mechanics, &c., in Port Phillip district, quarter ending 31st March, 1849.

Trade or Calling	Average Wages.	
	Town, per diem.	Country, per annum.
MALES:—		
Carpenters	s. d. 6 0	£43
Smiths	6 0	39
Wheelwrights	5 6	39
Bricklayers	6 0	40
Masons	6 0	40
Farm Labourers	—	23
Shepherds	—	21
FEMALES:—		
Cooks (Plain)	—	16
Housemaids	—	14
Laundresses	—	14
Nursemaids	—	13
General House Servants	—	14
Farm-house Servants, } Dairywomen, &c. . }	—	14

Note.—In the case of the country labourers, the price paid for their services includes board and lodging, which consist of a dwelling, with a ration of 10lbs. meat, 10lbs. flour, 2lbs. sugar, and 4 oz. tea (or milk, in lieu of sugar and tea), per week. The wives of farm labourers with families do not receive this amount of money wages, as a sufficient quantity of food is generally allowed for the support of their children and a corresponding deduction is of course made.

The expense of erecting a country dwelling suitable to an agricultural labourer is from £5 to £20, according to the materials, the locality, and the extent of accommoda-

tion. The expenses of a country dwelling are:—dwelling, 8; burglary, 2; housebreaking, 1; stealing in dwelling, 5; larceny, 51; forgery and uttering, 13; horse stealing, 9—total felonies, 98. Misdemeanours—assault, 10; riot and assault, 15; bribery, 1; obtaining money under false pretences, 1; libel, 1—total, 28. Capital convictions, 1.

tion; but country labourers are provided with rent-free dwellings by their employers.

The rent of a town lodging suitable to a mechanic and his family is from 4s. to 6s. per week.

There is no fund in the district for the relief of the destitute poor; but there are at Melbourne two societies, viz., the Stranger's Friend and the St. James's Church societies, which afford assistance to the poor and sick. Some immigrants have been rationed at the public expense.

It is not possible to say what amount of labour Victoria province is capable of receiving. According to the area and fertility of the soil, 20,000,000 people could with ease be sustained; the cry still is—*Give us labour*. This is shown in the following paper, compiled from returns from the principal benches of magistrates in the district of Port Phillip, showing the agricultural and other productions, and the demand for labour, &c., in each of the districts named, in the first quarter of the year 1849:—

Districts.	Principal Agricultural and other Productions of the District.	Demand for Labour, and description of Labourers required.
Melbourne . . .	Wheat, oats, potatoes, barley, vegetables of all sorts in abundance.	Most parts of the district are still requiring labourers; the city and vicinity a little better supplied than heretofore, in consequence of late arrivals of immigrants. All kinds of labour required.
Western Port . .	Wheat, oats, potatoes, and maize . .	There is still ample room for any number of immigrants likely to arrive; but single men and young married people without many children are generally preferred in the bush. Shepherds and farm servants are the descriptions of labourers in request.
Portland . . .	Wheat, oats, hay, vegetable, wool, hides, tallow, black oil, black cattle, and sheep.	The scarcity of labour was never more severely felt.
Geelong . . .	Wheat, barley, oats, potatoes, and all kinds of vegetables	The families of mechanics exceeding three, without adults, may probably meet with difficulties on their arrival. Domestic servants, farm servants, and shepherds are in request.
Murray	All kinds of grain	Agricultural and pastoral labourers are in request.
Gipps Land . . .	Grain, wool, and fat stock for exportation	Shepherds, stockmen, and farm labourers are in request.

The following statement is compiled from returns from the principal police divisions of the district of Port Phillip, showing the rates of yearly money-wages given in each division in the first quarter of the year 1849—food and lodging being provided by the employers:—

Trade or Calling.	Melbourne.	Western Port.	Portland.	Geelong.	Murray.	Gipps Land.
Carpenters . .	—	£52	£38	£40	—	—
Smiths . . .	—	40	38	40	—	—
Wheelwrights .	—	40	38	40	—	—
Bricklayers . .	—	—	—	40	—	—
Masons . . .	—	—	—	40	—	—
Farm labourers	£16	27	28	20	£20	£30
Shepherds . .	16	23	27	18	20	25
Cooks . . .	16	17	26	—	—	—
Housemaids . .	14	12	20	—	20	—
Laundresses . .	14	17	28	—	—	—
Nursemaids . .	13	10	18	—	—	—
Farm Servants .	14	17	—	—	—	—
House Servants	14	17	24	—	—	—

Country lands, as in the other Australian colonies, are offered for sale, from time to time, by public auction, at an upset price, as fixed by act of Parliament, of 20s. per acre; but farms enclosed, and partially or wholly cleared of timber, may occasionally be obtained, on a lease of three to five years, at a rent varying from 5s. to 10s. per acre. The number of leaseholders in this district,

as well as in New South Wales, is increasing; and such a course of procedure is advisable for newly-arrived immigrants who have but little capital, are not acquainted with farming, and require time and practice to understand a pursuit which at first sight appears very simple, but which really requires more watchfulness, steady labour, frugality, and even scientific knowledge, than any of the ordinary branches of manufacturing industry.

In 1848, the squatting licences issued for Port Phillip were, *within* the then settled districts, 383; *without* them, 18,863; total, 19,246; and the land sold in Port Phillip was 18,007 acres, for £24,030.

Squatters holding land under lease from the crown for pastoral purposes may, by permission of the crown commissioner for the district, transfer their "run" to another person. The price is determined not merely according to the quantity of land in the lease or "run," but by the healthy condition of the sheep, the purity of the breed, supply of water, contiguity to a shipping port, the quality of the pasture, and other circumstances. "Clean stations" average a sum of 9s. to 12s. for each head of sheep; the purchaser receiving also huts, hurdles, fencing, and implements, and taking the stock at a

valuation. A cattle station, which is considered less profitable than a sheep run, sells at the rate of 30s. to 40s. for each beast. Superior sheep and cattle sell at higher rates. Each sheep "run" carries at the least 4,000 sheep, or an equivalent number of horned cattle, for which a rental is paid to the crown of £10 per annum, and £2 10s. for every additional 1,000 sheep, or equivalent number of cattle.

Every large sheep or cattle "run" has an overseer, whose salary ranges from £50 to £200 per annum. The firm of Boyd & Co., it is said, paid their overseer £800 per annum; but their sheep amounted to nearly 200,000. Some young men judiciously commence as overseers, and learn their business before they invest their capital in stock. The *homestead* is the head-quarters of the overseer, who visits the distant flocks, supervises the shearing, the packing in the wool presses (with which the wool-sheds are each provided), and the despatch of the drays with the packs to Melbourne, Geelong, or Portland. Spacious steam boilers are also being attached to each homestead, for converting the fat into tallow, ready for shipment to England.

It is due to the class of Australian gentlemen termed the "squatters," to state, that but for them, Port Phillip would have been reduced to as low a condition as South Australia was before the discovery of its copper mines. Those who bought land largely at the government auction sales in Sydney and Melbourne, were ruined; their purchases were no more proof of the soundness of the "Wakefield theory," than was the purchase of scrip during the railway mania a proof of the prosperity of the country. In both instances, capital was transferred from industrious pursuits to be invested in gambling speculations. The squatters remedied the error; for like a young oak tree, around which a band of iron had been placed to prevent its growth, but which the expanding bark soon enveloped in its folds—so the squatters passed the settled boundaries of Port Phillip and of New South Wales, and found food for their increasing flocks and herds, which an act of Parliament would otherwise have prevented. By this means staple exports of wool, tallow, hides, horns, skins, and meat, were created; the colonies were enabled to import in return for their products, British manufactures; labourers were required to tend their sheep, the steady pursuit of wealth by industry and

perseverance took the place of land gambling, the settlements were rescued from the gripe of "land-sharks," and the wide-spread ruin caused by the "Wakefield system," to some degree mitigated. But the injurious effects of an erroneous course of policy are not so immediately remediable; unfortunately, a class-interest is created, who having paid a high price for their land, are not desirous of a reduction in the market price; some of the squatters also, knowing they can rent a "run" from government capable of feeding 6,000 sheep for £10 a year, prefer the maintenance of the present system, which practically prevents the sale of any land, except in the neighbourhood of towns, or for some special purpose. Until, however, a method be adopted, by which land may become a marketable commodity, no improvement can take place in Victoria province in any degree commensurate with its immense *agricultural* capabilities. Emigrants who can obtain fine land at 3s. to 5s. an acre, in British America, the United States, and Natal, will not be induced to pay 20s. in Australia. It is quite a different thing, to make free grants of blocks of several thousand acres to persons without capital, and to sell it at a moderate price; and yet the argument for fixing a price on land far beyond its real value, is based on the error alleged to be committed in Western Australia, where the granting of land free was not the cause of failure, as will be subsequently shewn.

In 1835 there were sold in the United States, about 12,000,000 acres of land; in 1836, about 20,000,000 acres; in 1837, the quantity fell to 5,000,000 acres; in 1838, 12,251,966 acres were offered for sale by public auction, and only 1,388,733 acres sold; the price paid was \$1,749,401, or about \$1½ (5s. 7½d.) per acre. The sales declined annually, until 1841. In 1842, they again increased to 1,600,000 acres, and advanced gradually to 2,200,000 acres, in 1847. Since 1819, the price has not exceeded \$1½ per acre; and it is now proposed to grant a certain quantity of land to every single or married immigrant who settles in the States. This is the best mode of attracting labour, and until something effective be done by reducing the price of land in Australia to its proper value, our surplus population will proceed by tens of thousands to America, compared with tens of hundreds who may be induced to voyage 15,000 miles to Australia.

BOOK IV.—SOUTH AUSTRALIA.

CHAPTER I.

ORIGIN—HISTORY—DISASTERS AND PROGRESS.

THE history of this now thriving settlement affords a remarkable instance of the truism that men and nations frequently overlook the wealth and advantages which are, as it were at their own door, and seek a doubtful good by speculative efforts remote from the practical field of operation which lies immediately before them. For nearly fifty years England had possessed a colony in New South Wales, and had been acquainted with the salubrity of the climate, the fertility of the soil, and the maritime advantages of the position, before any further inquiry was made into the intrinsic value of other parts of the vast island-continent over which her dominion had been established. As in other instances a superficial examination of the mere coastline had been deemed sufficient; and one of the naval officers employed, and considered with reason the first authority on the subject (Captain P. P. King, R.N.), stated before the Philosophical Society of New South Wales, in the year 1822, that "*the South coast of Australia is barren, and in every respect useless and unfavourable for colonization.*" How far this sweeping condemnation of a country larger than Great Britain, of which moreover only a small part even of the coast could have been seen by Captain King, is consistent with fact, will be seen in the following pages.

The inland discoveries of Oxley, Cunningham, and others, to the westward, northward, and southward of Sydney, from 1817-18 to 1827-28 (see page 383), and the extreme drought of three years' continuance induced reflecting persons to consider whether that portion of Australia open to the south winds of the Pacific might not be found better supplied with periodical rains, and that the dip of the land would be as in other parts of the world, and especially in the eastern hemisphere, from north to south, consequently that the great water-courses of the Blue Mountains, which served as drains for the country west of the sea-coast range, would be found to have a southerly direc-

tion. This opinion I expressed at the time in Australia, and stated that it was founded on what I had witnessed in Southern Africa, Madagascar, and other adjacent regions.

To Captain Sturt, an officer then serving with his regiment in New South Wales, belongs the great merit of solving this problem, of pointing out the capabilities of South Australia for a colony, and of giving an additional stimulus to the interior exploration. The adventurous journeys of Captain Sturt have been detailed (pages 383-384); after a perilous navigation of nearly a thousand miles, in a frail boat, on an unknown stream, with rapids, shallows, sand-spits, and sunken trees; the banks crowded with bands of hostile natives, and the country whither he was being hurried totally unknown, this gallant officer and his brave companions found their toils rewarded by arriving in the early part of the year 1830 at a large lake, from whence they soon reached the Pacific Ocean at Encounter bay, in the meridian of 138° 56' E. The loss by accident of a portion of his provisions compelled him to hasten his return towards Sydney, up the Murray, an undertaking far more arduous than his course down that stream with the current. This severe labour was successfully accomplished after eighty-eight days of incessant exertion and sufferings, which produced insanity in one of the party, and temporary blindness in their heroic leader. "It is impossible," says Major-General Sir Charles James Napier, "to read the account of Captain Sturt's expedition down the Murray without feeling much admiration for our countryman and his companions—an intrepid enterprize! Unanimated by the glory of battle, yet accompanied by the hardships of a campaign, without splendour and without reward. This little band of undaunted men well knew that severe trials awaited their bold adventure, perils from men, from water, and from starvation; and if they fell amidst these dangers, no fame would attend their memory,

their courage would be unheard of, and their death mourned only by a few friends. Nor was the fortitude with which they extricated themselves from the dangers of the desert less to be admired than the boldness with which they entered these wilds."

The brave ever respect the brave, and this desire of a distinguished officer, who often met death face to face in the battle-field, to "express the admiration he felt for these intrepid explorers, and to spread the record of their names,"* will be appreciated by all who estimate at its right value what is noble in man. But it is only those who have themselves traversed trackless wilds, traced to their sources rivers hitherto unknown, and navigated stormy and unsurveyed coasts, amidst tribes of savages more bloodthirsty than the tiger, who can estimate at its true worth the value of the services which Sturt, Mitchell, Leichardt, Eyre, Grey, Cook, Flinders, King, Stokes, Blackwood, Jukes, and other really great men have rendered by their discoveries in Australia.

On the return of Captain Sturt to Sydney, he stated, in his official report, an opinion of the country he had explored, as follows:—"Cursory as my glance was, I could not but think I was leaving behind me the fullest reward of our toil in a country that would ultimately render our discoveries valuable. * * * My eye never fell on a region of more promising aspect, or of more favourable position, than that which occupies the country between the Lake and the ranges of St. Vincent's gulf, and continuing northerly, stretches away without any visible boundary." Sturt added, "that a closer survey of the interjacent country (from Encounter bay up St. Vincent's gulf) would, he believed, be attended with the most beneficial results."

Fortunately, the then governor of New South Wales saw the importance of prosecuting further inquiries in this new region. Governor Darling immediately acted upon the recommendation of Captain Sturt; and Captain Barker, of his Majesty's 39th regiment, then about being recalled from what was considered a useless position—King George's Sound—was directed to ascertain how far the opinions of Captain Sturt were correct. Barker arrived in Gulf St. Vincent in April, 1831, and while engaged in exploring the country in the neighbourhood of Lake Victoria, was killed by the abo-

rigines. Sturt pays a well-merited tribute to this victim of the treacherous savages of Australia, and describes his lamented brother officer as mild and affable, possessing the esteem and regard of every companion, and the respect of every one under his command; zealous in the discharge of his public duties; honourable and just in private life; a lover and a follower of science; indefatigable and dauntless in his pursuits; a steady friend; charitable, kind-hearted, disinterested, and sincere; in him the crown lost one of its most valuable officers, and his regiment one of its most efficient members. The Mount Barker district, named after this good man, evidences the grateful appreciation of his character felt by the colonists.

Mr. Kent, one of the party attached to the mission of Captain Barker, fully corroborated the report of Captain Sturt. He stated that the soil was rich; there was abundance of the finest pasturage; no lack of fresh water; and that it was "a spot, in whose valleys the exile might hope to build for himself and for his family a peaceful and a prosperous retreat." The intelligence of the discoveries of Captain Sturt, and their confirmation by Mr. Kent, produced in England an anxious desire to form a colony in South Australia; and in 1831, a committee was formed to consider the subject. I attended some meetings, about this period, in the Adelphi chambers, but finding it was resolved to fix a high price on the land, declined co-operating personally, but gave every aid in my power towards the extension of our occupation of the Australian territories. Great credit is due to Mr. Gouger, who, after he had formed three or four provisional committees, was often left alone, to work out, at his own expense, the noble object he had in view. In 1834, an influential committee was formed, which included eighteen members of the house of Commons, who resolved to carry out what was termed the "self-supporting system," by which the colony would be no expense to England, as money would be obtained by the sale of waste lands, whereby the labour would be conveyed from the United Kingdom, and the formation of a prosperous settlement would necessarily ensure the means of an adequate revenue for its local government. This was no new idea; it was not a theory, as it had been termed: the plan had been practised in the earlier British colonies in the western hemisphere; and for some years the sale of waste lands in the

* *Colonization, particularly in South Australia*, by Major-General Sir Charles James Napier.

United States, and the formation of colonies in the wilds of the "far west," were known to have been very successful.*

This system was marred in its application to the crown lands of Great Britain, by the attempt to engraft on it principles and regulations which neutralised or perverted its effect. As to what Mr. Wakefield somewhat vaguely terms a "sufficient price," neither himself, Lieutenant-Colonel Torrens, or any of its advocates, have yet agreed what this "sufficient price" is; and, in the search after this *ignis fatuus*, New South Wales would have been ruined, had not the squatters evaded the impolitic law which fixed twenty shillings as the minimum price for all lands—good, bad, or indifferent. To Mr. Wakefield is, however, due the merit of having urged the formation of a colony at South Australia, by the sale of the crown lands. Whether he was the author of the pound an acre price, or the two or three pounds per acre, subsequently proposed, does not clearly appear in his recent work.† Colonel Torrens avowed his advocacy of the high price.

The public, easily captivated with an apparently novel idea, and having little leisure

* The property of the soil of the whole of the territory of the United States, is vested, by the consent of the several state governments, in the general government of the confederation at Washington, excepting such lands as belong to private individuals, or have been appropriated by the separate states for educational and other purposes. The extent of this property is, certainly, not less than one thousand million acres, which at 2s. per acre, shews a value of £100,000,000 sterling. The public lands have long been considered in the United States a valuable source of revenue; in 1776, Silas Deane laid before congress a plan for the sale and settlement of the territory north-west of the Ohio, and the calculations of the future value of this region, caused the first conflict of opinion among the several states. On the 20th May, 1785, an ordinance was passed by congress, for ascertaining the mode of disposing of lands in the western territory. Under this ordinance, 121,540 acres were sold, and three large tracts disposed of by what was termed "special contract." The price varied from one dollar to two-thirds of a dollar per acre. On 10th May, 1800, an act of congress defined the *land system* of the United States, of which the first feature was the rigid survey of the public lands, founded upon a system of true meridians. The largest division was a township comprising thirty-six square miles = 23,040 acres, this was sub-divided into sections of one square mile each, and further into quarter sections = 160 acres. In each district a land-registry office was established, with two public officers appointed by the President of the United States—a registrar, and a receiver of public monies, with a salary each of \$500 a year, and a commission of one per cent. on the moneys paid into their office. For some years credit was allowed on all purchases of public lands; but this caused speculations, arrears, and relinquishment of

to inquire either how much of it is new, or how much of it is applicable to the subject in question, are too ready to take on trust assertions for truths, and to believe (for a time), that what is popularised, must be correct. Had Mr. Wakefield, in pursuance of his meritorious efforts to establish a British colony in South Australia, confined his views to the retention of the price fixed in 1831 by Viscount Goderich and Lord Howick (now Earl Grey), viz., 5s. per acre, much suffering and great distraction of legislation would have been avoided. I am personally unacquainted with Mr. Wakefield, and entertain no adverse feeling to his projects; but am, on the contrary, disposed to appreciate to the fullest extent exertions which have had for their object systematic colonization. The field for thought and action afforded by our vast colonial empire is wide enough to admit of every variety of opinion, and it is that very diversity which appears, under Providence, best calculated to elicit truth and awaken the mind of the nation to the deep and daily increasing importance of the subject; for colonization, it must be remembered, is a national—emigration, an purchases. But in the year 1820, an act of congress altered this system, substituted cash payments for the credit system, and reduced the *minimum* price at which waste lands were to be offered for sale by public auction, from two dollars to one dollar and a quarter per acre. Lands not thus sold were subsequently open to purchasers at the *minimum* price. The value of the public lands sold in the twelve land states of the United States from 1787 to 1st January, 1848, was, in dollars, as follows:—Ohio, \$13,599,602; Indiana, 13,902,325; Illinois, 14,740,417; Missouri, 9,643,931; Alabama, 10,764,654; Mississippi, 9,714,942; Louisiana, 2,908,356; Michigan, 9,000,720; Arkansas, 2,832,277; Wisconsin, 4,309,669; Iowa, 2,227,828; Florida, 926,613. Total \$94,551,334; which, at fifty pence the dollar, is equal to £19,698,184 13s. 4d. The area of these twelve land states is given at 392,579,200 acres, of which 304,376,348 acres are surveyed, and 78,812,286 acres are unsurveyed; 100,209,656 acres have been sold; and, on 1st January, 1849, 289,961,951 acres remained unsold. During 1847, 2,521,305 acres sold, for \$3,296,404. The quantity of land offered for sale in the year 1849 was 9,113,400 acres. In the territories of the United States, north and west of the regularly organized states, there are 208,332,000 acres of land to be sold at about 5s. an acre. What prospect have our colonies for selling land at 20s. an acre in Australia or New Zealand?

I must reserve for the conclusion of this work, further details on this important subject; but sufficient has been stated to shew the fallacy of the idea, that Mr. Wakefield had "*invented* a system for the sale of waste lands;" whereas a *judicious* system has been in operation in the United States for fifty years.

† *A View of the Art of Colonization*, by E. G. Wakefield. London: 1849.

individual—undertaking. My opposition, therefore, refers neither to individuals nor to theories, but to what I conceive to be the proved error of fixing a price on the waste lands of our colonies so high, as to drive emigrants with but limited means to the United States, where land is obtainable on moderate terms, and where, I believe, it is now contemplated to give every respectable immigrant a limited number of acres free of all charge. With this preliminary explanation, I proceed with an account of the formation of the colony of South Australia.

By the persevering exertions of Messrs. C. Buller, Wakefield, Whitmore, Grote, Angas, Torrens, Hutt, Rowland Hill, and other gentlemen, aided by the Duke of Wellington in the house of Lords, an act was passed on the 15th August, 1834, by the Imperial Parliament (4 & 5 William IV., c. 95), under which South Australia, within certain defined boundaries, viz., "that part of Australia which lies between the meridians of 132° and 141° of E. long., and between the Southern Ocean and 26° of S. lat., together with the adjacent islands thereto," were declared to be a British province. A board of three or more commissioners was to be appointed by the crown under the act, to carry the intentions of the legislature into effect; this board was to be represented in the new colony by a resident commissioner; no convicts were to be sent to South Australia; the minimum price of land was fixed at 12s. per acre, to be disposed of in public by auction or otherwise, as the commissioners might deem best; the proceeds of all land sales to be applied to the purpose of sending out free emigrants; adult persons of the two sexes, as far as possible, to be in equal proportions of both sexes, and not exceeding the age of thirty years; no poor person—husband or a wife—could be conveyed alone to the colony, nor without their children; the commissioners were empowered to borrow money on bonds to the extent of £200,000, to pay the expenses of the colony, and to make it a charge on the revenue, produce of rates, duties, and taxes, as a colonial debt; whenever the population amounted to 50,000, a constitution was to be granted, and until this period had arrived, his Majesty might empower persons resident in the colony to make laws, levy rates, duties, and taxes, subject to the approbation of the king in council; the act was not to be in force until the sum of £35,000 had been raised by the sale of

land. The commissioners were further required to raise £20,000 by the issue of bonds, as South Australian revenue securities, and this sum was to be invested in the public funds, as a guarantee that the colony would at no time be a charge on the British exchequer. If within ten years from the date of this act of Parliament, there were less than 20,000 natural born subjects of his Majesty in the province, all the public lands then unsold would be liable to be disposed of by his Majesty in such manner as shall seem meet.

In May, 1835, the commissioners were appointed, Colonel Torrens chairman. They fixed the price at 20s. an acre, but it was found too high a price; for after the commencement of the sales, and notwithstanding incessant efforts for two months, considerably more than half the quantity of land required to be disposed of, in order to commence operations, remained unsold. The commissioners therefore announced, on 1st October, 1835, that "the price of land included in the preliminary sales should be reduced to 12s. per acre." The first purchasers were, accordingly, entitled to receive for £81, one acre of town land, and 134 acres of country land. This was little more than 12s. per acre, and a fair price, considering that an acre of town land was given. It was, nevertheless, still found difficult to fulfil the conditions of the act of parliament.

In this dilemma, an association, termed the *South Australian Company*, was formed, which owed its origin to Mr. G. F. Angas, who, with his own capital, and that of a few friends, who had confidence in his prudence and integrity, raised, at their own risk, the sum necessary to purchase a considerable quantity of land. When success, in going forward, thus became certain, these gentlemen handed over their interest in the project to a company, under the above designation, merely receiving five per cent. per annum for the use of the cash advanced. Mr. Angas, a gentleman of considerable experience, and of a fine energetic spirit, became chairman of the company, which dates its establishment from the 22nd of January, 1836, when £200,000 was subscribed, in 4,000 shares of £50 each, on which £5 per share were immediately paid. 13,770 acres (including 102 acres of the site of the first town) were purchased from the South Australian commissioners, on favourable terms, such as—the selection of their own la-

bourers; the reduced price of 12s. per acre, in lieu of 20s.; the right of purchasing one acre in the metropolis of the colony for every 134 acres of country land, this privilege being limited to 437 sections; the right, to purchasers of 4,000 acres and upwards, of selecting in any district they pleased; the privilege of leasing, for 10s. per annum, 640 acres of pasturage for every forty acres purchased, while non-proprietors had to pay 40s. for the same quantity.

The commissioners continued until the end of February, 1836, to sell land at 12s. an acre, to all who were able to satisfy them that the purchasers would take out adequate capital, to be employed in the improvement of the colony. The holders of the first 437 land orders were to have priority of choice, of both land and pasturage, over all others. Any one paying in advance for 4,000 acres had the right of requiring a survey to be made of any compact district not exceeding 40,000 acres, and, within a reasonable time after such survey, to select his 4,000 acres from any part of such district, before any other applicant. The privilege of selecting servants and labourers, for a free passage from England to the colony, was allowed to all purchasers in England, at the rate of one person for every £16 expended in land.

By the 24th section of the act, the South Australian commissioners were required to invest £20,000 in government securities, as a guarantee against the colony becoming a charge on England; and, as they were authorized to raise a loan of £200,000, at a rate not exceeding ten per cent. (18th section), they issued tenders for a loan to the amount of £80,000, to be received by instalments. Tenders, however, were received to the extent of only £13,000, at ten per cent. interest, and on the terms that the loans were not to be paid off, nor the interest reduced, for several years. The commissioners then proposed to raise £100,000, at six per cent., by bonds, to be issued at £80, for £100, and not to be paid off in less than twenty years. They could have raised the money on these terms, but the solicitor-general was of opinion that the act of Parliament did not authorize such a proceeding. After considerable delay and much private exertion, Mr. Wright, then an eminent banker in Henrietta-street, Covent-garden, and who was at that period one of the South Australian commissioners, agreed, on the 12th of November, 1835, to

advance £30,000 to the South Australian commissioners, on the following terms:—£20,000 to be paid down on the 18th inst., and the remaining £10,000 on the 15th of December following. The loan not to be paid off for ten years from the date of advance, and to bear interest at ten per cent. per annum, payable half-yearly, in London; a commission of two per cent. to be paid to Mr. Wright on £25,000. These terms were accepted; £20,000 were lodged in the Three per Cent. Consols, in the names of three trustees nominated by his Majesty's government, and the secretary of state approved of the transaction.

By these proceedings, but chiefly, as before observed, by the large purchases of the before-mentioned company, the South Australian act was brought into operation; and the crown appointed as governor of the province, on the recommendation of the commissioners, Captain Hindmarsh, a brave and experienced sailor, but totally unfit for a position foreign to all his past pursuits. Mr. J. H. Fisher was nominated resident commissioner, and Lieutenant-Colonel Light surveyor-general.

On the 1st of March, 1836, the commissioners raised the price of land to 20s. per acre, and announced that, at any time during the first year from the period of the landing of the governor, the price might be raised to 40s. per acre, by the colonial resident commissioner. All sales were to take place in the colony, but investments conferring the right to select labourers might still be made in this country; subsequently, however, sales were also made in England.

On the 20th March, 1836, the first vessel despatched by the South Australian commissioners, named the *Cygnets*, of 239 tons, sailed from London: she was followed by the *Rapid* brig, of 162 tons, both fast-sailing craft, under the orders of Colonel Light, the surveyor-general, accompanied by his surveying staff, who were ordered to prepare for the reception of the governor, and the chief body of settlers who were to follow in H.M.S. *Buffalo*, and two other vessels. The *Cygnets* and the *Rapid* were each fully equipped to act independent—supplied with provisions for one year, with proper surveying instruments, arms, ammunition, tents, clothing, utensils, tools, medicines, and necessities of all kinds likely to be required; also with a boat fitted for surveying the various inlets, and a portable boat on a light carriage, for use in land explorations. The

expedition was composed, besides the surveying staff, under Colonel Light, of Captain Lipson, R.N., as harbour-master, two surveyors, and thirty mechanics and labourers, including three carpenters, two smiths, four woodmen, one shoemaker, and two or three gardeners, besides the crews of the vessels. Colonel Light was in the *Rapid*, with Messrs. Field, Pullen, and Hill, as first, second, and third officers; Messrs. Jacob and Symonds, as assistant-surveyors; and Mr. John Woodford, as surgeon. The *Cygnat* contained Mr. Kingston, the deputy surveyor-general, Captain Lipson, Messrs. Finnis, O'Brien, Neale, Hardy, and Cannan, as assistant-surveyors; Dr. Wright, as surgeon; Mr. Gilbert, as storekeeper; and a few passengers. As nothing was really known of the mainland, the vessels were ordered to proceed first to Nepean bay, in Kangaroo Island, which was to be the place of rendezvous, where the gardeners were to be landed—a plot of ground, stocked with vegetables; the provisions and stores not required for the purposes of the survey were to be disembarked, together with the wives and families of the officers and men, if arrangements could be made for their temporary accommodation and safety. The surveyor-general was then to proceed to examine the coast in the central parts of the intended colony, excepting the parts surveyed by Flinders; his attention was particularly directed to Nepean bay and Port Lincoln, but more especially to the line of coast from the east of Encounter bay to the north of Gulf St. Vincent, and the inlet in 34° 40' S. lat. was pointed out as demanding careful examination.

Wherever a good harbour was found, the land around for a considerable distance was to be explored, and if suited for the site of even a secondary town, to be surveyed. The responsibility of selecting a position whereon to found the future capital of the province devolved on Colonel Light, who although instructed to confer with the governor on the subject, (should he arrive before the selection was made,) and to pay due regard to his opinions and suggestions, was fully authorised to act according to his own convictions. The South Australian commissioners in London possessing no knowledge of even the coast-line, could only lay down general rules for the guidance of their surveyor; such as a commodious harbour, safe and accessible at all seasons of the year, a considerable tract of fertile land immediately adjoining, an abundant supply of fresh

water, facilities for internal transit, and for communication with other ports, distance from the limits of the province, “as a means of avoiding interference from without in the principle of colonisation,” and the neighbourhood of extensive sheep walks; and as of secondary value, building materials, such as timber, stone, brick, and lime; facilities for drainage and coal. When the most eligible spot was selected, the streets were to be laid out of ample width, arranged with reference to convenience, salubrity, and beauty, and with the necessary resources for squares, public walks, and quays. The district around the intended capital was to be arranged, mapped, and divided into sections of 13½ acres each, of a form convenient for occupation and fencing, and a road reserved adjoining each section. All land on the coast within not less than 100 feet of high water-mark, and at least sixty feet along each side of a navigable river, and around every lake or other sheet of water, to be reserved as a public road. Collision with the natives was to be avoided, the wild animals to be considered as their property, and sporting by the Europeans to be discouraged as much as possible, and when districts were found inhabited, to be prevented altogether.

The *Rapid* reached Nepean bay, Kangaroo Island, on the 19th August, 1836, and the *Cygnat* on the 11th September following; they found three vessels belonging to the South Australian Company which had previously arrived, viz.—on 27th July, 1836, the *Duke of York*, which carried out emigrants and the colonial manager of the company (Mr. Samuel Stephens), who was subsequently thrown from his horse when riding on Mount Lofty range, and died on the spot; on the 30th July, the *Lady Mary Pelham*, and on the 16th August, the *John Pirie*, under the command of Captain Martin. The manager of the South Australian Company had landed, built a mud hut, surrounded it with a small battery, and hoisted the British ensign. The *Africaine*, Captain Duff (an able and energetic commander), arrived early in November, with emigrants, having on board the colonial secretary and the emigration agent. The *Tam O'Shanter*, *John Renwick*, and *Coromandel*, each with emigrants, soon followed; the latter vessel carrying out a banking institution, and the advocate-general and colonial surgeon. The women and children, store-keeper, gardeners, and stores, were landed from the *Rapid* and *Cygnat*, at Nepean bay,

and Colonel Light proceeded to examine Kangaroo Island; thence explored from end to end the western shore of Gulf St. Vincent; then visited Port Lincoln, in Spencer's Gulf, where the governor, Captain Hindmarsh, was expected, in the *Buffalo*. The surveyor-general did not deem Port Lincoln eligible for the site of the chief town; but one spring of water was found, and that below high-water mark; no good or clear land was seen, and the entrance to the fine harbour considered to be surrounded by shoals, rocks, tide-ripples, and other difficulties, which rendered the approach hazardous.

The explorers then proceeded to examine the east coast of Gulf St. Vincent, where they discovered a creek about fifty miles from the open sea, which proved to be the embouchure of a fresh-water river, and appeared to Colonel Light "as beautiful and safe a harbour as the world could produce." It was found to be sheltered from every wind, abounded in smaller creeks—one branch extending seven miles, and nearly one mile wide, and with a depth of three to five fathoms, suitable for vessels of three to four hundred tons. The country, where examined, resembled English park scenery, and consisted of widely extended open plains, moderately wooded, with a rich soil clothed with luxuriant grass, and watered by numerous streams. It sloped backwards from the coast for several miles, to a line of sandy hills, intersected by picturesque valleys terminating in an elevated range, to which the name of Mount Lofty was given; behind this range lay Lake Alexandrina (now Victoria), and the country of the Murray river. Colonel Light deemed this spot the most eligible for the site of the future capital of the province of South Australia,

* Considerable opposition was made for some time by several members of the colonial government, to the site chosen by Colonel Light, some contending for Port Lincoln, others for the neighbourhood of Encounter bay. Sir John Jeffcott, the judge, was in favour of the latter, and while endeavouring to prove the justice of his opposition, he lost his life, together with Captain Blenkinsopp, by the upsetting of a boat.

† The foundation of a new settlement in the wilderness is always an interesting ceremony, and among the ancients it was preceded by religious solemnities. On the present occasion, the course of proceeding was as follows:—as soon as H.M.S. *Buffalo*, with Captain Hindmarsh on board, came to an anchor, preparations were made for landing, and on the same day the gallant officer landed, escorted by a party of marines, and accompanied by the various official authorities, together with the ladies of their

and on the banks of the Torrens river, about seven miles inland from the anchorage, the plan of Adelaide was marked out.*

Captain Hindmarsh anchored in Holdfast bay on the 28th of December, 1836, and was immediately proclaimed governor.† Colonel Light, under the authority of the commissioners, had, as previously stated, fixed the site of the future city of Adelaide before Captain Hindmarsh arrived, who, although he had accepted the appointment on condition of "non-interference with the officers appointed to execute the surveys and to dispose of the public lands," soon acted as if he was on the quarter-deck, where no one dare question his judgment. Disputes arose between the governor appointed by the crown, the resident commissioner, Mr. Fisher, Colonel Light, and, in fact, between most of the officials.

In March, 1837, the town lots were selected; but the country lands were not allotted until May, 1838, and then only partially. The settlers, on arriving, found living very dear; the lands, for which they had paid in England, were not granted immediately; and the controversies of the authorities caused great discontent. The commissioners in England, on the 22nd of December, 1837, addressed a despatch to Lord Glenelg, his Majesty's secretary of state, complaining of the governor, who, on the 21st of February, 1838, was recalled.

The conduct of the official authorities under governor Hindmarsh appears not to have been very creditable, and made his administration of the affairs of the province a matter of great difficulty. The resident commissioner (Mr. J. H. Fisher), appointed by the Australian commissioners in London, refused to obey the authority of the governor; and when Captain Hindmarsh had dis-

several families. They were received in the tent of the colonial secretary, by the gentlemen who had previously arrived with Colonel Light, who had fixed their temporary habitations on the plains afterwards named Glenelg. The commission of the king, appointing Captain Hindmarsh governor, was read to the assembled settlers, numbering about 300; the appointments of the members of council and of the executive government, were announced; the customary oaths of office were administered to the governor by the colonial secretary, the British flag was hoisted under a royal salute, the marines fired a *feu-de-joie*, the *Buffalo* saluted his excellency the governor with fifteen guns, a dinner, or rather cold collation, was laid out in the open air, the health of his Majesty was drunk with enthusiasm, the national anthem was played and sung, healths were given and speeches made.

missed an emigration agent, named Brown, for neglect of duty and inhumanity towards the emigrants, (one of whom, named Trollope, died in the public hospital at Adelaide, in a state of destitution,) Mr. Fisher publicly placarded his reinstatement of Brown. The colonial secretary, Mr. Robert Gouger, and the colonial treasurer, Mr. Osmond Gilles, fought in the streets of Adelaide publicly, and were taken into custody by the serjeant of marines, who acted as chief constable. The offenders were conveyed to government house, detained ten minutes, and then liberated, on their parole to keep the peace. The colonial secretary was aided and abetted by Mr. Mann, the advocate-general of the colony. The governor suspended Mr. Gouger from his duties as colonial secretary, who thereupon threatened to bring an action against the governor for "false imprisonment—damages, £10,000." This is a sample of the disagreeable proceedings which took place in the infant state of the settlement, of which details are given in the *South Australian Gazette*, No. 6, for September, 1837, and in other numbers.

The next recommendation of the commissioners of a governor was even more unfortunate than the preceding. One of the chief claims of Captain Hindmarsh was, that he had distinguished himself at the battle of the Nile, and fought under Lord Nelson. So, also, his successor, Lieutenant-Colonel Gawler, had been "present at many of the great sieges and battles in the Peninsula—Badajoz, Vittoria, Nivelles, Orthes, Toulouse, and lastly at Waterloo, where he commanded the right flank company of the 52nd, during the great charge on the imperial guards." What evidence the meritorious conduct of a midshipman or captain of a company at the Nile and at Waterloo could afford of the adaptation of the individual for the peculiar duties of civil governor in a young agricultural settlement, it would be hard to divine. It is quite true, that naval and military officers have occasionally (though seldom) made efficient governors of colonies; but they are exceptions to a rule. Much of the long-protracted misrule of some of our colonies may be traced to the evil of appointing soldiers and sailors as civil governors, irrespective of their aptitude and fitness for such important and difficult duties. But another opportunity will occur for the examination of this subject when treating of the *Colonial Policy of the British Empire*.

The recommendation of the commissioners

was, however, adopted; and Lieutenant-colonel Gawler was appointed by the crown governor of South Australia; the resident commissioner, Mr. Fisher, was removed, and the duties of his office were entrusted to Colonel Gawler, who thus represented, in his own person, the interests of the crown and those of the South Australian commissioners: he assumed the duties of his office in the colony on 12th October, 1838. An act of the imperial legislature, (1 & 2 Vict., c. 60), passed 31st July, 1838, amended act 4 & 5 William IV., and empowered the commissioners, or their representative in the colony, with their consent, to borrow such sums from the land fund as might be necessary for the efficient government of South Australia.

The lords of her Majesty's treasury, on 9th November, 1838, issued minute instructions on the subject of expenditure. On 8th February, 1839, the resident commissioner, (Colonel Gawler), was allowed, on account of some additional charges, to increase his expenditure, altogether, to £16,500 per annum; and later in the year he was informed, that the commissioners would be ready to afford pecuniary aid, to any moderate extent, in erecting wharfs at Adelaide; and they approved of the erection of a government house and public offices, "the total cost of which was not to exceed the estimate of £25,162." It is asserted, that a "general authority" was also given to Colonel Gawler, as the resident commissioner, to deviate from his instructions under circumstances of indubitable necessity. The sales of land, up to this period, were not of such extent as to justify any extravagant hopes, or expenditure of money. The Australian commissioners stated, that the whole of the land sold from the commencement of their proceedings on 15th July, 1835, to 7th December, 1837, consisted of 64,358 acres, for which they received £43,221. The details were—437 land orders, each for 135 acres, included in the preliminary sales, = 58,995 acres, £35,397; one deposit forfeited, £20; 200 land orders, exclusive of the preliminary sales, each for 80 acres at 12s. per acre = 1,600 acres, £960; land orders at 20s. per acre = 3,200 acres, £3,200; investment for the purchase of land in the colony, £50; amount received by the commissioner in the colony for sale of town sections by auction, not included in the 437 preliminary orders, 563 acres, £3,594; total number of acres, 64,358; total amount of purchases, £43,221.

In 1838, the sales were stated to be—January, acres, 320; February, 400; March, 880; April, 1,200; May, 1,200; June, 5,920; July, 4,480; August, 4,640; September, 4,480 = 23,520 acres.

The state of the colony at this period may be judged of by the following extracts from the speech of the official gentleman who ruled the affairs of the province from the period of the departure of Captain Hindmarsh, to the arrival of Lieutenant-Colonel Gawler. The acting governor, Mr. Stephens, after stating to the council the difficulties to be encountered, said—"I have *first* to announce, with regret, that *there are no funds in the treasury*; and the quarter's salary due to the whole of the public servants on the 30th June last, (1838), is at this day unpaid. *Second*—by the departure of the marines in H.M.S. *Alligator*, this province, with a population exceeding 4,000 persons, is abandoned to the protection of eighteen policemen, lately embodied by governor Hindmarsh; and there are now twenty-one prisoners confined in the weather-boarded hut used as a gaol, and perhaps double that number of desperate runaway convicts in the neighbourhood of the town. *Third*—there are no funds for the support of the force now constituting our only protection. *Fourth*—the embarrassed state of the survey department, and the want of land."

On the arrival of Colonel Gawler, on 12th October, 1838, at Adelaide, he found all things in confusion;* "the public offices with scarcely a pretension to system; every man did as he would, and got on as he could; there were scarcely any records of past proceedings, of public accounts, or of issues of stores; the survey department reduced to the deputy surveyor-general (Colonel Light had resigned), one draughtsman, and one assistant-surveyor—its instruments, to a great extent, unserviceable, and its office with scarcely any maps of the country, and totally without system, records, or regulations; the colonial finances in a state of thorough confusion and defalcation; the population shut up in Adelaide, existing principally upon the unhealthy and uncertain profits of land jobbing; capital flowing out, for the necessities of life, to Sydney and Van Diemen's Island, almost as fast as it was brought in by passengers from England; scarcely any *settlers* in the country; no tillage; very

little sheep or cattle pasturing, and this only by a few enterprising individuals risking their chance as squatters."

These were herculean difficulties—quite enough to have occupied the energies of any governor, and to warn him against extravagant expenditure. Meanwhile the most strenuous efforts were made by the commissioners to raise money by the sale of land, and the real merits of South Australia magnified until the public were well-nigh led to consider it the only settlement worthy of being the residence of a free Englishman. Large quantities of land were soon sold in London, where speculation was rife, in "town lots and country sections." Up to August, 1839, there were sold 250,320 acres of land, which produced £229,756; and 7,412 persons had arrived at Adelaide: but many of the English purchasers who bought these lands have not received, to the present day, any returns for their outlay.

Instead of directing attention to the cultivation of the soil, and the real foundation of the colony, Colonel Gawler launched out into a most lavish expenditure in the erection of public buildings quite unnecessary in an infant settlement, and which kept large numbers of the labouring classes in Adelaide dependent on government works when they ought to have been clearing, ploughing, and cropping the land on their own account. By this means the price of labour became inordinately high, and speculations in town lots and buildings the principal occupations of the people. In 1839 there were only 2,500 acres of land under cultivation.

The colonial revenue was about £20,000 per annum, the expenditure at the rate of £150,000 per annum. In the *first* quarter of 1839 it was £8,950; in the *second* quarter, £16,000; in the last quarter of 1839, £34,000; and in the last quarter of 1840, £60,155. The extravagance of all parties in the colony is abundantly proved in the documents laid before parliament in 1843. Amongst the items in these papers is the charge made by a police constable at Port Lincoln of "ten shillings for two pounds of *wax* candles for a *prisoner* for six nights;" this was certified by the "resident magistrate," but the auditor subsequently remarked—"it is not usual to allow felons any light in their cells; they are locked up when darkness sets in, and certainly do not require *wax* candles."

Individuals holding official situations under the government were allowed to supply

* Despatch from Colonel Gawler to Lord Glenelg, her Majesty's secretary of state for the colonies, 23rd January, 1839.

stores for the service of the department in which they held office, and the bills for such stores were rendered and paid some months before an examination took place by an auditor; among other stores thus supplied without any written authority, and for no known object, I perceive in the list "three tins of wine biscuits, £6 6s.," about ten times their value; "£105 for ten casks of port wine," no statement of the number of gallons in each cask; "£4 10s. for six tins (of 4lbs. each) preserved meat," or 15s. a tin, the then usual shop price in Adelaide being 5s. To a bullock driver, 11s. 8d. a day, and £4 a week for the hire of his bullocks. Everything else was in an equally wasteful ratio. The annual government expenditure for the support of the different departments was about £94,000, exclusive of buildings, roads, printing, emigration, and other charges; to meet this heavy outlay the colonial revenue amounted at the utmost to £30,000 a year.

While the governor in his capacity as resident commissioner was thus drawing upon futurity, the land sales in England were falling off, and the commissioners were obliged to raise temporary loans for colonial purposes, borrowed from the emigration fund, which all persons purchasing land in the colony had been assured should be solely expended in conveying labour to South Australia. By August, 1840, the amount due to the emigration fund was upwards of £90,000, which was expected to be replaced by the end of the year. This however was rendered absolutely impossible by the rapidity with which Colonel Gawler's bills came pouring in. The South Australian commissioners were, in August, 1840, compelled to lay a statement of their difficulties before Lord John Russell, who determined on instituting a parliamentary inquiry into the financial state of the colony, pending which inquiry there was no alternative but to dishonour the bills drawn by Colonel Gawler on the commissioners; which was done accordingly, to the great damage of the colony and of its interests.

Colonel Gawler was advised by the South Australian commissioners that no further funds remained in their hands, upon receipt of which intelligence he publicly notified his intention of drawing upon the lords of the treasury in his capacity of governor, for the purpose of paying the current expenses of the government. Large debts were thus contracted to store-keepers and others for supplies.

On the 26th of December, 1840, her Majesty's government were compelled to recal Colonel Gawler from South Australia; the grounds assigned by Lord John Russell were "that he had drawn bills in excess of the authority received from the commissioners." Whether this were so, or whether he had, as he appeared to believe, almost a *carte blanche* from the commissioners, there could be no doubt of the necessity of his immediate recal from a position for which he had proved himself in an important respect so ill qualified. Mr. Dutton represents Colonel Gawler as possessed of many virtues, and distinguished in private life by high intellectual attainments. This is, I believe, perfectly true; the colonists entertained for the gallant officer, whose moral conduct and personal character are unquestionable, great respect; but her Majesty's government were not the less bound to remove him as an incapable financier.

It is the opinion of an intelligent gentleman—one of the first emigrants to South Australia—that many of the difficulties of the colony arose out of the unwarrantable interference of governor Hindmarsh with Colonel Light and the resident commissioner. He asks—"Of what use was it to proceed with the country surveys, when the colonists were led to believe that the site of the chief town or city selected by the surveyor-general would not be confirmed by the South Australian commissioners at home? Who would think of selecting or purchasing, and then locating on land, under such circumstances? The people were frightfully unnerved; this was the reason of the land not being tilled; the capitalist, the farmer, the emigrant remained in the town, squandering their money, and gambling in town allotments. Many of those people who, perhaps, held preliminary land orders, found, when the excitement subsided, and their land could be selected with safety, that their ready cash had vanished, and their land orders were mortgaged."

There is a great deal of just observation in these remarks; but they appear to me an effect, rather than a cause. The Imperial Legislature clogged the act of Parliament authorizing the formation of the colony with injudicious restrictions; compelled a large quantity of land to be sold, and considerable sums of money to be raised *before the act became operative*. Instead of encouraging any body of Englishmen who would colonize the wastes of South Australia, obstacles

were interposed in their attempts to accomplish this most desirable object, which was attended with many formidable difficulties. The proceedings of the South Australian commissioners added to the embarrassments created by the act of Parliament; and, indeed, in some respects, they were the inevitable result of a primary error. *Twenty*, or even *twelve* shillings an acre for land, of which the very locality was unknown, was a most injurious perversion of a sound principle of selling surveyed lands at a moderate fixed price. The appointment of conflicting authority in the persons of a governor and a resident commissioner, the unfortunate selections made in Captain Hindmarsh and in Colonel Gawler as governors, and the wasteful expenditure of the latter, produced a climax which undoubtedly caused great distress, but from which arose a sounder system, on which the existing prosperity of this fine colony now rests.

The position of affairs is shown in the debate on the South Australian bill in parliament, on the 15th of March, 1841, when Lord Stanley stated that the colony had commenced on the principle of loans, had continued on a system of credit, its prosperity had been fictitious, and now the bubble was burst, and the full mischief which had been created had been discovered. The noble lord added, "he did not wish to enter into details, but when they saw that at the expiration of four years from the commencement of a colony there was an expenditure of £140,000 per annum, the revenue of the colony not being more than £20,000; that the government-house had been built at an expense of £24,000 on sanctioned authority; that £22,000 had been laid out in the formation of a road across a swamp for the purpose of improving a harbour originally badly chosen; that lands bought for 12s. an acre were sold in the hardly created town of Adelaide for £500, £1,000, or £1,500 an acre (a price hardly obtainable in Liverpool itself for an acre); that there had been established three banks carrying on business and issuing their own paper; that labour had reached the price of from 6s. to 12s. per day; that a body of police was established, paid at the rate of £1 19s. per week each man, who complained of the inadequacy of their wages, because they were unable to procure their white trousers and gloves to be washed for it—what, he asked, was the consequence of all this?—that there were not 200 acres of land in the colony actually under tillage for

the support of the colony, the whole of the colonists directed their attention to land-jobbing and speculation, and a profligate waste of money had taken place in a manner utterly inconsistent with the success of the colony."

Captain Grey, late of the 83rd regiment, was appointed to succeed Lieutenant-Colonel Gawler. This officer carried off high literary honours at the Military College of Sandhurst; in 1837–8–9, when a lieutenant, he voluntarily undertook, in company with Lieutenant Lushington, of the 9th regiment of infantry, an expedition of discovery to the west and north-west coasts of Australia (see page 379). The talent and judgment evinced by Lieutenant Grey in this arduous pursuit of knowledge, the local information which he possessed of South Australia, and the comprehensive mind which was evident in his language and writings, made a strong impression on Lord John Russell, then secretary of state for the colonies, and induced his lordship to recommend to the Queen for the government of South Australia, a gentleman who, whether a soldier, sailor, or civilian, was evidently adapted for the responsible duties entrusted to his care.

On 19th March, 1841, the house of Commons temporarily voted £155,000 towards the liquidation of the bills drawn on the South Australian commissioners by Lieutenant-Colonel Gawler, which the commissioners had no funds to meet. Governor Grey arrived at Adelaide in May, 1841; he found the balance in the hands of the colonial treasurer only £700, and the anticipated expenditure for the *quarter*, £32,000, and about £3,000 remaining due from last quarter. At the same time, £35,000 of claims left unsettled by Governor Gawler were clamorously pressed upon Governor Grey for liquidation. The sales of land had all but ceased, the revenue was decreasing, the colonial establishments were unnecessarily large, and there were little or no funds to carry on the government. The South Australian Bank offered Governor Grey a loan of £10,000, at twelve per cent., on his personal security; this he properly declined—the crown property in the colony he was authorised by her Majesty's ministers to sell, but the derangement in the money market caused by the proceedings of Lieutenant-Colonel Gawler, rendered such a measure impossible; no alternative remained, but to postpone any attempt at liquidating the bills of his predecessor, until the issue

of the pending parliamentary inquiry should be known. Retrenchment was everywhere begun—the government works which could not be left half-finished, without the risk of dilapidation, were completed so far only as was absolutely necessary; the labourers, who had for eighteen months been employed at high wages, were urged to betake themselves to agricultural labour in the country, or if they did not, Governor Grey treated them, to the number of nearly 2,000 men, women, and children, as mere pauper emigrants, but allowed none to want the necessaries of life; by this means, the energies of the people were directed from unprofitable buildings in town, to lucrative tillage and pastoral pursuits. A sum of £3,000 was obtained as a loan from the New South Wales government; the Lords of the Treasury defrayed the cost of completing the requisite work on the public buildings, the pauper emigrants, and the police establishment.

In July, 1841, Governor Grey met the Legislative Council with reduced estimates, as follows:—

Reductions in	1841.	1842.
Survey and Land Department	£14,850	£3,635
Emigration	6,927	390
Storekeeper's "	23,748	340
Police, mounted and foot . .	16,109	9,112
Customs department . . .	9,769	2,478
Harbour Master's "	3,944	1,612
Gaol	2,141	1,034
Port Lincoln	1,299	572
Total	78,787	19,173

There were also various minor reductions, and several useless offices abolished. The wages given by government to the emigrants were reduced from 1s. 6d. a day, with rations, to 1s. 2d. without rations, and they were withdrawn from Adelaide, and employed in making bridges and in opening lines of communication, such as the *Great Eastern road*, to the valuable Mount Barker district.

Her Majesty's secretary of state for the colonies and the lords of the treasury effectively supported the measures of Governor Grey, and, in a despatch of their lordships to Lord Stanley, of 26th April, 1842, they stated that, "the governor had acquitted himself in an able and satisfactory manner, of the important trust which had been placed in him."

During the administration of Governor Gawler, everything had a fictitious value;

a return to a sound state necessarily caused a rapid fall in the price of land and houses, and there were many bankruptcies. Nearly one-half the population of the province (8,500) had crowded into Adelaide, among whom had been spent, during the twelve months preceding the arrival of Governor Grey, about £150,000, which had been procured by drawing bills on the South Australian commissioners in England. This large sum was distributed in the form of salaries, allowances, and lucrative contracts. The whole population of South Australia was then less than 15,000 (14,061), who thus received, man, woman, and child, each £10. And although there was abundance of the richest land around ready for the plough, the immense sum of £277,000 was sent out of the colony during the year 1840, for the purchase of the necessaries of life.

The character of Governor Grey was manifested by the exercise of a wise statesmanship, and the firmness with which he resisted the clamorous demands made by tumultuous bodies of men using seditious language, and marching in organized array to government-house, threatening the representative of their sovereign, whom there was no military to protect. But these and other unjustifiable proceedings, did not prevent the governor contributing £400 in one year to charitable purposes, out of his limited income of £1,000; and to his honour it is recorded, that "real poverty and distressed merit never in vain sought relief."

In November, 1841, with a view to the relief of the colony, whose mercantile community was limited, Governor Grey drew upon the lords of the treasury for the amount of the bills which Colonel Gawler had drawn, but which were then dishonoured by their lordships. For this proceeding Governor Grey was slightly censured by the Secretary of State; in justification he alleged that Parliament had voted £155,000 to liquidate the dishonoured bills of Colonel Gawler.

Captain Frome, of the Royal Engineers, who had arrived in the colony with a small detachment of that excellent scientific corps, undertook to perform, gratuitously, the arduous duties of colonial engineer. Under the active superintendence of this able officer, the land surveys made rapid progress, and by the end of 1841, claimed special surveys of 4,000 acres each, to the number of thirty-five, were completed, and

306,000 acres were declared open for the selection of new immigrants. The cost of surveying was reduced from an almost unknown large sum, to $7\frac{1}{2}d.$ per acre.

The recommendations of the select committee of the house of Commons were not immediately carried out, owing to the change in the ministry; but on 5th July, 1842, Lord Stanley, her Majesty's secretary of state for the colonies, with his accustomed ability and clearness, laid fully before the legislature the state of South Australia, and of the liabilities incurred, which Mr. Dutton gives as follows:—

I. Parliamentary grant, advanced in 1841	£155,000
II. Bills of Lieutenant-Colonel Gawler remaining unpaid	27,290
III. Bills of Governor Grey, on account of emigrants maintained at the public expense	17,646
IV. Amount borrowed by South Australian Commissioners, bearing interest at 6 to 10 per cent. per annum	85,800
V. Outstanding debts of Lieutenant-Colonel Gawler's Government	35,000
VI. Amount borrowed from Land and Emigration Fund	84,697
Total	£405,433

This was an unfortunate illustration of what was termed the "self-supporting system of colonization;" in about four years the colony had incurred debts to the amount of £400,000, irrespective of its land sales and local revenues. Lord Stanley proposed to settle the debt of South Australia, thus:—I. (£155,000) To be made a free grant by parliament; II. and III. to be paid by the British treasury; IV. to remain as bonds with the holders, at an interest of three and-a-half per cent. guaranteed by her Majesty's government, and for which provision would be made out of the consolidated fund; V. and VI., to be covered by debentures issued in South Australia bearing interest not exceeding five per cent. His lordship also proposed to insert a sum of £15,000 in the estimates, to aid in carrying on the local government in 1842. The resolutions of the noble lord were agreed to by a large majority, and an act "for the better government of the province of South Australia," was passed 15th July, 1842.

I cannot agree with Mr. Dutton, that Parliament could be expected to sanction the payment of the dishonoured drafts of Governor Gawler, or the renewed drafts of Governor Grey, and that no portion of them should have been entailed as a burden on

the colony. The question was one which it was utterly impossible to solve to the satisfaction of all parties—for, whether the penalty of Colonel Gawler's grievous improvidence was to be paid by the ruin of the colony, or averted by a heavy sacrifice at home, it would in either case be borne by the innocent. Her Majesty's government, in agreeing to pay upwards of £250,000 out of the taxes raised from the people of England, towards a debt which, although incurred by their representative, holding under them authority whose measure, whatever it may have been, he doubtless greatly exceeded—certainly evinced no desire to shrink from the responsibility which they had incurred in sanctioning the unwise selection of the Australian commissioners. The money, it must be remembered, had been actually spent (though in a manner most lavish and ill-timed) *in and for* the colony, and the public buildings therewith constructed, would eventually benefit the South Australians. The dishonouring of the bills drawn by Governor Grey in payment of Lieutenant-Colonel Gawler's expenditure at Adelaide, necessarily increased the financial difficulties of the colonial government; Governor Grey was obliged to borrow £1,800 from the commissariat chest; during 1842, 136 writs were passed through the sheriff's court at Adelaide, thirty-seven fiats of insolvency were issued, and out of 1,915 houses built in Adelaide, 642 were found, in December, 1842, *totally deserted*, their inhabitants having proceeded into the country to labour in raising the means of subsistence from the fertile interior, where ploughs and harrows were in great demand.

At the beginning of 1843 every able-bodied man was at work on his own account; the harvest was so abundant, that there were not sufficient hands to reap it, and the soldiers and government *employés* were permitted to aid the farmers in securing the real wealth of the colony. The revenue began to improve; the exorbitant port dues which had been levied by Governor Grey to increase the "ways and means," were abolished, and the *post road* which had been constructed by the South Australian Company, at an expense of £13,400, under an agreement with Governor Gawler, that twelve per cent. interest was to be paid on the capital expended, by the colonial government, or that a toll might be levied, was compounded for by Governor Grey giving the company authority to select 12,000

acres of land out of the surveyed districts, in full of all claims on this account. The land sales were, however, checked partly by the distressed state of the colony, and partly by the operation of an act passed by the Imperial Legislature, 22nd June, 1842, "for regulating the sale of waste lands in the Australian colonies and New Zealand," which enacted that all lands should, in future, be disposed of by public auction at the minimum price of 20s. per acre, except blocks of 20,000 acres, of which the price should not exceed 20s. per acre. Under this act, *half* (not all) the proceeds of the land sales were to be applied to emigration purposes.

In 1843 the whole of the land sales in South Australia amounted to only 598 acres; the proceeds, to £613 13s. 9d., and but for a discovery then made, the colony would have had to maintain a long and difficult struggle against the enhanced price of land. Among the eighty-acre sections sold in 1843, there was one on the river Light which was found to contain rich copper ore; a discovery which led to further researches, and gave a stimulus to the enterprise and industry of the colonists, which has ever since continued, and has been the means of greatly enriching South Australia. The circumstances connected with this important epoch in the history of the province deserve detailed notice.

For several years after our occupation of the province of South Australia, no suspicion was entertained of the mineral riches to be found there, and the crown unreservedly granted, in fee simple, the ground and everything beneath it. Up to 1843, more than 300,000 acres of land had been surveyed and appropriated, and 300,000 more were surveyed and open to selection; but no one noticed the copper and lead which were nevertheless "cropping out" on the surface in so many places. During the latter part of the year 1842, a son of Captain Bagot, while gathering wild flowers in the plain, found and conveyed to his father a fine specimen of the green carbonate of copper. Fortunately for the colony, an intelligent settler named Dutton, to whose interesting work, entitled "*South Australia and its Mines*," I am materially indebted for details concerning its early history, had been educated at the institute of M. de Feltenberg, at Hofwyl, in Switzerland, where during the annual pedestrian tours of the pupils, he had acquired some knowledge of

mineralogy. One day, when in search of one of his flocks of sheep which had dispersed during a thunder-storm, he ascended a hill to obtain a view of the surrounding country, and, if possible, find his sheep. Wet, weary, and cold, from having been out all day, he pulled up his horse beside a rock which, at first sight, he supposed to be covered with a beautiful green moss. The habit acquired in Switzerland, of examining any rocks or stones which presented a curious appearance, induced Mr. Dutton to dismount, when he found a large protruding mass of clay slate strongly tinged and impregnated with a mineral which he supposed must be copper, from the close resemblance of the colour to verdigris. Mr. Dutton being on intimate terms with Captain Bagot, communicated his discovery to him, and the value of the mineral found by the young florist on the plain, and by the sheep farmer on the adjacent hill (Kapunda), was soon ascertained.

Captain Bagot and Mr. Dutton kept their own counsel; got a section of eighty acres surveyed, which according to the then land regulations, was advertised for a month in the government gazette; they then became the fortunate purchasers, at the fixed government price of £1 per acre, although there were a number of "eighty-acre land orders" previously granted to individuals in the colony, who might have selected this section. What the marketable value of this tract may now be, it would be difficult to say; in April, 1845, Captain Bagot and Mr. Dutton bought another lot of 100 acres, adjoining their original purchase, which they found contained rich lodes of copper ore; but on this occasion, instead of buying the 100 acres for £100, it cost them, after a sharp contest by public auction, £2,120. The great value of the ores soon became known, and the eighty-acre section containing the Montacute copper mines, put up for auction by government at £80, sold for £1,550. The Kapunda copper ores taken from the surface were sent to England, and found to yield twenty-three per cent. Some Cornish miners pursuing quietly agricultural pursuits in the colony, were soon engaged by the proprietors; and a place which a very few years since was a perfect wilderness, is now a thriving township, affording profitable employment to a considerable population.

The attention of all classes was now directed to geological and mineralogical know-



JOHN JERVIS, EARL OF ST VINCENT.

OB. 1823.

FROM THE ORIGINAL OF HOFFNER IN

HIS MAJESTY'S COLLECTION.

ledge; but the overseers, herdsmen, and shepherds, who frequently could not find anything but a piece of metallic ore to throw at a stray beast, were the principal discoverers of the valuable minerals which lay everywhere exposed to the most ordinary observation.

The *Montacute* copper mine, distant ten miles from Adelaide, was discovered by Mr. Andrew Henderson, overseer to Mr. Fortnum, while in search of a lost bullock. Mr. Henderson, when ascending a spur of the Mount Lofty range, remarked the green colour of a perpendicular cliff, broke off a piece, and conveyed it to Mr. Fortnum, who, from his chemical and mineralogical knowledge, instantly recognised the specimen as a rich copper ore.

Messrs. Fortnum and Henderson did not keep their secret; and when the government had surveyed the eighty acres required, and the section was brought to sale (16th February, 1844,) under Lord Stanley's regulations, instead of £80, the purchasers had to pay £1,500. In a few hours after the sale, however, they sold thirty hundredth parts for the cost of the whole, in £50 shares, to a mining company.

Mr. G. F. Angas has also had the good fortune (which he richly deserved, for his unceasing efforts to benefit South Australia,) to discover valuable mineral treasures in his extensive property, and has leased the mines on advantageous terms to mining associations.

Furnaces for smelting the ores of copper and lead, and refineries for separating silver from the argentiferous ores, have been erected near the different mines; and works which will cost £70,000 are now in course of construction near the Burra-Burra mines. Copper and lead ores will be smelted on the spot, rolled, and shipped direct to the available markets of India and China.

In consequence of the mineral riches contained in the province, the sale of land, which in 1843 was at a very low ebb, has since that date considerably increased. Two special surveys, of 20,000 acres each, have been demanded, and the purchasers paid £40,000 for the same. The Kapunda mining land yielded £3,008; the Montacute, £1,550. The Burra-Burra territory cost the original proprietors £11,000. The total amount paid for mineral lands, from 1843 to 1847, was about £70,000. A sale of the crown lands surrounding the Kapunda mine, realized for the first section of eighty acres £7,100, or about £90 an acre; another

section brought £80; others, £20 to £30; the total (2,804 acres) yielded £30,081.

But these proceedings were not mere wild speculations. Messrs. Bagot and Dutton, who bought the first eighty-acre mineral section (copper) at Kapunda, for £80, subsequently refused, in London, £27,000 for their land; and they have from the commencement worked entirely on the ores, without risk, and without the advance of a shilling being required from the proprietors. The first lead ore sent (in 1841) from Adelaide to England sold for twelve guineas a ton. The different ores raised in South Australia probably exceed in value one million sterling; and the amount is annually increasing. Agricultural as well as pastoral pursuits have not been neglected; but have flourished, by means of the wealth derived from the mines.

The subsequent chapters will show the progress of the colony, when the revenue began to exceed the expenditure, and the exports the imports; the extension of cultivation; and the augmentation of wealth.

Governor Grey remained long enough at Adelaide to witness a pleasing change in the feelings and language of the inhabitants towards him; and when, in 1845, her Majesty's government resolved to confide the administration of affairs in New Zealand to his proved judgment, his excellency quitted the scene of his difficulties, and of his triumphs, with the esteem and heartfelt gratitude of those he had so efficiently governed.

The task of his successors has been comparatively an easy one. Governor Grey was succeeded, in 1845, by Major Holt Robe, of her Majesty's 87th regiment, late military secretary at Gibraltar; and Major Robe, in 1848, by Sir H. E. F. Young, who filled with credit to himself for several years the post of secretary to the government of British Guyana, was next appointed lieutenant-governor of Eastern Africa, from whence he was removed to the responsible position of lieutenant-governor of South Australia, which station he now occupies.

The facts contained in the previous pages go far to show that South Australia cannot fairly be quoted as an argument either for or against the system adopted in its formation; since the leading causes both of its past disastrous and present successful state, viz., the improvidence of Colonel Gawler, and the discovery of its readily available mineral stores, were equally unforeseen by the founders of the colony.

CHAPTER II.

POSITION, AREA, PHYSICAL FEATURES—COAST LINE—HARBOURS, MOUNTAINS, RIVERS, AND LAKES—GEOLOGY, MINERALOGY, AND SOIL—CLIMATE AND SALUBRITY.

THE province of South Australia is situated between 132° and 141° E. long., and extends from the sea coast on the south, inland, to the twenty-sixth parallel of latitude. The area comprised within these limits is estimated at 300,000 square miles, or 192,000,000 acres, being more than double the dimensions of the British isles. Of this extensive territory, the greater part is, if not totally unexplored, at least very imperfectly known. According to a recent local authority, the only portions which have as yet been examined are, the peninsula formed by St. Vincent's gulf, on the west, and Lake Victoria or Alexandrina and the Murray, on the east; the western boundary extending from Cape Jervis to the great bend of the Murray, in 34° S. lat.; Yorke peninsula, between the Gulfs of Spencer and St. Vincent, and the peninsula of Eyria, the boundaries of which extend from Sleaford bay, in a northern and eastern direction as far as the head of Spencer's gulf, and in a northern and western direction as far as Streaky bay; the latter of these tracts have been, however, but very imperfectly examined.

South Australia, though it has not the grandeur imparted to the adjacent colony of Port Phillip, by the lofty summits of the Australian Alps, possesses, nevertheless, much picturesque scenery; and its only serious defect, the want of navigable rivers, is in great measure remedied by the accessible nature of the country.

COAST LINE.—The sea-board of this province, roughly estimated at about 1,500 miles, trends in a general south-east direction from the 132^{nd} meridian, which falls on the coast a little to the westward of Cape Adieu, to the 141^{st} meridian, a short distance eastward of Cape Northumberland, and is, throughout its whole length, indented with numerous deep and extensive bays, (besides the two great Gulfs of Spencer and St. Vincent), which though as yet very imperfectly known, are supposed to be, with few exceptions, the resort of the whale during the rainy season. Like most of the sea-coasts of this hemisphere, that of South Australia is bordered by many small islands,

few of which are of any considerable size, Kangaroo island being the chief exception, and rocks, reefs, and shoals, frequently render the entrances to the inlets intricate or dangerous, to a great extent neutralizing the advantages presented by the indentations of the coast, whose leading features we now proceed to notice.

Tracing the sea-line in the direction in which we have before stated that it trends, the first haven met with is *Fowler's Bay*, which, though it affords but indifferent shelter, is valuable from being the only harbour for several hundred miles; the dangerous nature of the shores to the east of the province being rendered yet more hazardous, by the strong current which sets into the Great Australian Bight. The anchorage is good, and although it is open to three points of the compass, it is evident, from plants growing close to the water-side, that a swell capable of injuring a vessel at anchor is seldom, if ever, thrown into it. Between Fowler's bay and Point Bell, the coast is moderately elevated, but barren and sandy; it is broken into three sandy bights, separated from each other by rocky projections.

Nuyt's Archipelago is situated in the extensive curve of the main coast between Points Bell and Westall, which comprehends several deep bays. The principal islands of this Archipelago are those of St. Peter and St. Francis, of the former, the most considerable, is low and sandy, about six miles in length and three or four broad. On it is a well dug by a sealer, who lived there many months. The shore abreast of it is of the same character, and connected with it by a shoal and some dry rocks, whence the shore trends round to the north and west, towards *Point Peter*, and forms—

Denial Bay, a good harbour, said to afford great facilities for whale fishing. Round the north side of Point Peter is a small boat harbour, with four fathoms at its entrance; but this depth rapidly decreases, and the creek terminates in an extensive morass.

The Isles of St. Francis are eleven in

number, they compose the south-westernmost group of Nuyt's Archipelago; but one only of them, situated in the middle of the cluster, is of any considerable size; it bears the name of the whole. *Isle St. Francis* is about three miles in length, and about half-a-mile across, near the middle, which is a sandy isthmus, connecting the moderately high and cliffy extremes, whose breadth is from one-and-a-half to two miles. The dark brown birds called sooty petrels, abound here, and a large bird called the barnacle goose, occasionally frequents the island.

Smoky Bay is six or seven leagues across, but very shoal and dangerous of entrance, being much exposed to the south and west. *Point Brown*, its eastern extremity, is a low sandy projection, in $32^{\circ} 37'$ S. lat., $138^{\circ} 48'$ E. long., between which and *Cape Bauer* a cliffy headland, extending four or five miles into the sea, is the low sandy shore of *Streaky Bay*, a beautiful and extensive harbour, which obtained its name from its inner portion being filled with light-coloured, streaky water, bearing on its surface much refuse from the shore, and sea-weed. Whales are very numerous in this bay, and oysters are procured here in immense numbers, and of excellent flavour. At the distance of four or five miles from *Cape Bauer* lies *Olive's Isle*, the south-east of Nuyt's Archipelago; it is low, about three miles in circumference, and surrounded by breakers.

Point Westall is somewhat higher than *Cape Bauer*; the space between them is occupied by a bight, skirted by a sandy beach, and open to the westward, which received from the French, who, it will be remembered, explored about 100 miles of this coast, the name of *Corvisart Bay*.

Cape Radstock, a bold projection, in $32^{\circ} 12'$ S. lat., $134^{\circ} 15'$ E. long., forms the southern extremity of a range of limestone cliffs, that line the shore for about six miles to the north-west; from thence to *Point Weyland* a large body of water runs parallel to the coast, having an entrance at both points.

The *Investigator's Isles* lie off this portion of the sea line. *Flinders' Island*, the largest and most central, is in shape nearly a square, each side of which is from three to five miles in length, with rocks projecting from the intermediate points. Bights are formed on the four sides; but the northernmost alone appeared to afford good anchorage. The island, according to Captain Lee, is covered with wood, possesses plenty of fresh water, and is admirably adapted for a whaling sta-

tion. Flinders, who discovered it, gives a different and almost contradictory account of its capabilities; for he states that no fresh water could be found, nor could fire-wood, even of very small size, be procured without difficulty; yet it was frequented by hair seals, sooty petrels, and small kangaroos; and at a former season, probably during the spring, had been visited by geese.

Waldegrave Isle, the most easterly of *Investigator's* group, lies close to the main land. *Anxious Bay* is situated between it and *Cape Radstock*.

Proceeding in a south-easterly direction, the next feature worth noticing is *Coffin Bay*, a whaling station of some importance. It is rather an inlet than a bay, and stretches so far into the land as to approach within sixteen miles of *Boston Bay*, which lies nearly opposite to it, on the eastern side of Flinders Peninsula. It is seven or eight miles across, and is well sheltered from all winds, save from north to east; but, unfortunately, a great portion of it is rendered useless by the shallowness of the water. The inner portion of the bay, however, is said to contain two or three secure harbours, with excellent anchorage. About two miles distant from the sandy east shore of *Coffin Bay* is *Mount Greenly*, a well-wooded hill, which rises between 600 and 800 feet above the level of the sea, and is remarkable as being the first elevation of any importance marking the difficult and dangerous coast we have just been tracing. Mr. Cannan, who examined the coast, in 1840, as far as *Fowler's Bay*, says that there is no "rise that can be called a hill from *Mount Barren* to *Mount Greenly*," and speaks of the eternal limestone cliffs, and the scarcity of water and grass, along these shores.

To return, *Fowler's Bay* is sheltered on the south and west by a barren and sandy tongue of land, whose northern extremity is named *Point Sir Isaac* (in honour of Sir Isaac Coffin), and the western, *Point Whidbey*. To the east of the latter lies *Avoid Bay*, a large ill-sheltered inlet.

Point Avoid, the south-east head of *Avoid Bay*, is low, and has two small rocky islets connected with it by a reef lying off from it to the extent of nearly three miles. These are the easternmost of *Whidbey's Isles*, which extend in a line nearly five leagues from *Point Avoid*, and are small but considerably elevated; the westernmost of the group is a cluster of small rocky lumps called the *Four Hummocks*.

Perforated Isle, the largest and nearly the central of Whidbey's group, is about a mile in length, and near its summit has an excavation through which the light is admitted on both sides. *Granby's Isles*, three small high islands, with a peak on the easternmost or largest, said to be visible ten leagues off in clear weather, lie fourteen or fifteen miles off Point Whidbey.

Cape Wiles is a steep cliffy head in $34^{\circ} 57'$ S. lat., $135^{\circ} 38' 30''$ E. long., with two high rocks and a lower one near it. *Liguanea Island* lies about three miles from the shore, is of moderate elevation, and about a mile and-a-half in length.

Sleaford Bay is seven or eight miles across, and about four in depth, but being quite unsheltered from the southerly swell that rolls in so frequently upon this part of the coast, is of comparatively little value. It is occasionally used as a whaling station. *Sleaford Mere* is a shallow lagoon about four miles long and one broad, situated two or three hundred yards from the sea beach of Sleaford Bay.

Cape Catastrophe, so called from a boat's crew belonging to H.M.S. *Investigator*, whose names were afterwards given by Flinders to the islands in Thorny Passage, having been lost in the strong tide rippings of this shore, marks the western side of the entrance to *Spencer's Gulf*. It has a round smooth summit, clothed with vegetation; three miles to the south of it lies *Williams Isle*.

We have now arrived at the deep gulf, which stretches into the land for nearly 300 miles, extending to $32^{\circ} 30'$ S. lat. It becomes quite narrow and shallow at the top, and appears at one time to have communicated with Lake Torrens. The extreme saltiness of its waters throughout renders it only too probable that no fresh water stream of any importance disembogues within its limits.

The entrance of *Spencer's Gulf* is about fifty-five miles across, several islands are situated in it, of which, by far the most important, *Thistle Island** is about twelve miles in length, and from half-a-mile to two miles broad, affording good pasture for sheep.

* No fresh water could be found on this island by Captain Flinders, who explored it in 1802; he states that he found seals upon the beach, and further on numberless traces of the kangaroo. Signs of extinguished fire existed everywhere; but they bespoke a conflagration of the woods of remote date, rather than the habitual presence of men, and might have arisen from lightning, or from the friction of two trees in a strong wind. On their way up the hills a speckled yellow snake was met with asleep, measuring seven

Gambier Isles lie to the south-east of *Thistle Island*; the chief of them, *Wedge Island*, is so called from its wedge-like form. *Neptune Isles* are low, rocky, and surrounded by breakers.

Thorny Passage, formed between *Thistle Island* and the main, is from four to six miles wide. It obtained its name from the numerous small islands which contract its southern entrance so materially as to leave only about a mile-and-a-half of its breadth safe for ships, the depth there being twenty and twenty-two fathoms.

From *Cape Catastrophe* the shore of the gulf trends to the north, till on rounding *Cape Donnington*, in $34^{\circ} 44'$ S. lat., $135^{\circ} 57'$ E. long., the north harbour of *Port Lincoln* opens to view, with its three branches—*Spalding Cove*, *Port Lincoln proper*, and *Boston Bay*. This magnificent haven, from its great extent, and the number of its secure and sheltered anchorages, is capable of containing the largest fleets, and as a dépôt can scarcely be surpassed by any port in the world. It is said strongly to resemble that of Rio Janeiro. The first object that strikes the eye is Stanford hill, on the summit of which is a white obelisk, erected to the memory of Flinders by Lady Franklin, marking the spot whence that celebrated navigator first beheld *Spencer's gulf*. At the entrance of *Boston bay* is *Boston island*, a hilly and romantic-looking spot, scattered here and there with casuarina trees, and clumps of various shrubs, and its shores indented by a succession of deep bays. It is uninhabited: only the solitary grave of an emigrant occupies a glen on that side of the island which looks towards the settlement from across the bay.† The anchorage in *Boston bay* is considered even safer and more accessible than that of *Port Lincoln proper*. The two channels of entrance into the bay, round the island, are practicable for vessels of the largest size, with any wind, or in any weather; for the harbour is so sheltered by the headlands forming the entrance, that the swell of the sea is broken before reaching it. The high ground which

feet nine inches, and on his return a white eagle, with fierce aspect, and outstretched wings, bounded towards them, but stopping short at twenty yards off, flew up into a tree. Another eagle discovered himself by making a motion to pounce upon them, evidently mistaking them for kangaroos. These birds sit watching in the trees, and should a kangaroo come out to feed in the day time, it is seized and torn to pieces.—*Flinders' Terra Australis*.

† *Savage Life*, by G. F. Angus.

almost surrounds Boston bay, protects it in like manner from the winds, more especially those from the west and south-west, in which directions some of the hills attain the height of several hundred feet. The depth of water in the central parts of the bay is about twelve fathoms, varying from five to seven, at the distance of less than a quarter of a mile from the shore all round; whilst at Boston point, where the town has been laid out, there is a depth of two, three, and four fathoms, at about a boat's length from the land. The bottom consists, in some places, of mud, in others, of shells and sand. The tide sometimes rises seven feet, but usually not more than five; this depends, however, on the outward state of the gulf, and the quarter from whence the wind is blowing. In the summer season, the land and sea breezes blow very regularly for three weeks or a month at a time. They are then succeeded by strong winds from the south-west, that last for three or four days, and are sometimes very violent. In winter, these interruptions to the usual calm state of the weather are more frequent, but the harbour is little influenced by them. (See Captain Sturt's *Account of South Australia* in 1847.) To the east and north-east of Port Lincoln are scattered numerous islands, known as Sir Joseph Banks' group, whose names and positions are sufficiently indicated on the map.

Our information respecting the shores of Spencer's gulf is too fragmentary to afford materials for any connected account. From Port Lincoln to Franklin harbour a succession of rocky bays occur, many of them with fine sandy beaches, and shelter for small craft. Short reefs run out from all their points; but outside of these, and generally between them, the water is deep, and apparently clear of dangers.

Franklin Harbour affords good and well-sheltered anchorage; it is the port at the entrance of *Lake Flinders*, a sheet of water eight miles in length, by two in breadth, the greater part being, however, very shallow, and surrounded by mangrove swamps. In 1846, the head of the gulf was examined by the lieutenant-governor, Colonel Robe, for the purpose of ascertaining an eligible place of shipment for the produce of the northernmost located part of the province. The chief result of his expedition was the discovery that that portion of the gulf there, about ten miles across, extending immediately north from *Point Lowly*, in $32^{\circ} 57'$

S. lat., to the latitude of Mount Remarkable, $32^{\circ} 43'$, contains a commodious harbour, well sheltered, and of easy access. A long sand spit, stretching from the point (not named) of the eastern coast, opposite to *Point Lowly*, dry at low water, shelters the anchorage from southerly winds.

Port Germein, situated about twelve miles south-east by east from *Point Lowly*, affords good shelter for small craft. The port is bordered by mangrove swamps. A sandstone hillock, called *Benjamin's hill*, marks the north-east side of the entrance, whilst at the south-west entrance is a low mangrove point, off which a broad sand-shoal extends for many miles into the gulf.

The eastern shores of Spencer's gulf, formed by *Yorke Peninsula*, are marked by *Port Victoria*, situated at the spot termed by *Flinders* *Point Pearce*, now occasionally called *Wardong Island*, in whose neighbourhood there are stated to be several safe and commodious anchorages: further to the south, and nearly opposite to *Port Lincoln*, is an extensive and well-sheltered inlet, called *Hardwicke Bay*. *Cape Spencer*, the extremity of *Yorke peninsula*, is in $35^{\circ} 17'$ S. lat., $136^{\circ} 52'$ E. long.; off it lies *Althorpe Island*, a rocky islet, frequented by innumerable sea-fowl, in *Investigator's Strait*.

The *Gulf of St. Vincent* is about half the size of Spencer's gulf, which it resembles in the swampy nature of the shallow water at the top, and the perfect saltness of the water where both shores unite. *Kangaroo Island*, which lies across its entrance, effectually protects it from the swell of the heavy southerly seas, and forms two wide and safe passages, the western being known as *Investigator's Strait*, the eastern as *Backstairs Passage*. The navigation of the gulf itself is throughout easy and perfectly free from hidden dangers. In *Investigator's strait*, on the southern coast of *Yorke Peninsula*, nearly midway between *Cape Spencer* and *Trounbridge Shoal*, is an extensive bay, called *Sturt Bay*, which affords good and safe anchorage, for although open to the south and south-east, winds from these quarters, owing to the narrowness of the strait, do not raise a sea sufficient to impede a vessel in weighing anchor. The western shore of the bay is formed by a promontory of sand hills (from forty to fifty feet in height), clothed with grass and casuarina trees, terminating in *Point Davenport*, a flat rocky point which forms an effectual breakwater during south-west gales.

On the eastern coast of Yorke Peninsula, i. e. the western shore of St. Vincent's gulf, nearly opposite to Adelaide, is a good harbour, called *Port Vincent*. Between the head of St. Vincent's gulf, in about $84^{\circ} 30'$ S. lat., and Port Adelaide, its eastern shore is alternately lined with mangroves, or low and sandy, affording nevertheless several commodious havens for small craft. The most important of these is *Port Gawler*, an inlet or channel surrounded on either side by mangrove swamps, by which the little river Gawler enters the gulf. The next important inlet is that which contains *Torrens Island*, and terminates in the large creek on whose eastern bank Port Adelaide* is situated. From thence to Holdfast bay, which lies about fourteen miles to the southward, a sandy beach continues backed by sand hummocks, that conceal the nearer country, but are not high enough to impede the view of the summits of the Mount Lofty range, distant about eleven or twelve miles.

Holdfast Bay, behind which is the fertile and beautiful tract called Glenelg Plains, is not very appropriately named, being in fact an open roadstead, exposed to north-west, west, and south-west winds, which, when blowing hard, raise a short tumbling sea. The ground is a fine sand, almost covered with weeds, so that when the anchor once starts, the weeds being raked up under the crown, will in a great measure prevent its again holding. In the summer months it may be considered a perfectly safe anchorage, if due caution is exercised in giving the vessel cable in time.† About the middle of the bay is an inlet of the sea, on which boats can enter and discharge their cargoes at high water, but at low water they are obliged to unload on the beach, owing to a bar of sand at the entrance. The southern arm of the bay is formed by the termination of the range of hills running from the north. A few miles from this bay the coast becomes bold and rugged, and, excepting one small sandy bay, into which a fresh-water stream oozes, continues so to the outlet of the *Onkaparinga*, the largest river on this side the gulf. There is a bar at its entrance, over which boats can only pass at high water, and it is salt as far as the tide flows, about three miles. There is no anchorage at this part of the coast.

Noarlunga township is situated near the mouth of the *Onkaparinga*, to the south-

* For description of Port Adelaide, see city of Adelaide, in a subsequent page.

ward of which is a remarkable detached rock of a tabular form. Near this point some extensive gravel pits, with deep chasms and gullies, are very conspicuous; from these a gentle slope of nearly a mile runs along the coast into the plains, with an extensive beach of sand and shingle, forming a very narrow bay, called by Colonel Light *Deception Bay*. The scenery now becomes exceedingly diversified, dark cliffs and small sandy bays, with grassy slopes, almost to the water's edge, succeed each other, backed by moderate hills, sparingly covered with trees, and broken into numerous valleys. Thus passing *Aldinga Bay*, the outlets of several small streams, *Yankallilla Bay* and river, we arrive at a deep bay, protected on all sides by rocky mountains, and backed by a beautiful little valley surrounded by an amphitheatre of hills, richly covered with kangaroo grass, from which descends a small fresh-water stream, flowing through the valley between high banks, and abounding with fish. The hills here do not run in one continuous longitudinal range, as higher up the gulf, but to Cape Jervis, seven or eight miles southward, are thrown together as it were without any arrangement. They are covered, however, with good soil, are in many places well wooded, and enclose fertile valleys and rich openings, with numerous small streams. A rocky point, called by Captain Flinders, North-west High Bluff, forms the northern extremity of "Pat Bungar," a small but secure boat harbour, surrounded on all sides by low sloping hills. In the vicinity of *Rapid Bay* the cliffs in many places rise perpendicularly to a considerable height, and are veined with micaceous schist, or mica slate, with occasional veins of dolomite and other minerals. Copper ore has been found here. A few miles beyond is *Cape Jervis*, the projection which marks the eastern entrance to the gulf, whose shores (with the assistance of several authorities, but especially of the recent volumes of Sturt and Angus) we have now traced to their termination.

Kangaroo Island lies twelve miles south of Cape Jervis. Its length and area are differently estimated; but it is generally stated to be about seventy-eight miles, and thirty in breadth, with a superficies of 2,500,000 acres. The principal features of the land, as seen from the western coast, are swelling rounded hills, clothed with thick scrub, intermingled

† *Sailing Instructions for South Australia*, by Captain Lee.

with clumps of trees. Cliffs of a whitish colour, rising abruptly from the sea, attain in some places a height of 300 feet. Many romantic and sandy bays indent the southern coast, a long line of bold cliffs and rocky shores mark the north-western boundary. This extensive island is supposed by Mr. Menge to have been formerly connected with the mainland at Cape Jervis, and to have been separated by the ceaseless operation of the sea, which opinion is confirmed by the continuation of the mica slate formation all along its southern coast. Kangaroo island appears not long ago to have consisted of two islands, since joined by an accumulation of sand and lime at Lagoon bay. Limestone is continually accumulating around the coasts, and rests upon the primitive slate. This limestone contains, in a petrified state, the shells thrown out by the sea, and stumps of the indigenous woods, with their roots also petrified. Nine miles in the interior there are belts of iron and limestone running through the island, between which good arable soil is occasionally found.

The denseness of the vegetation prevents an accurate knowledge of the interior; it is supposed that considerably more than three-fourths of the surface is covered with brush-wood and dwarf gum trees; there is, however, large timber. Mr. W. H. Leigh measured one tree growing in the interior, and found it nineteen feet in girth, as high as he could reach, enormously lofty and umbrageous, and with others growing around it, as in an English wood; the minor plants and climbers which spring up at the roots of the forest timber, render exploration difficult, if not impossible. In several instances, where the land has been cleared, it has, however, yielded good returns, and quantities of the finest onions and other produce are now sent from Kingscote to Adelaide. The scarcity of good water, and the great difficulty of obtaining it, appears to be general throughout the island. The valleys running out to the north coast are filled with high timber, but there are some tracts of excellent soil along the table-land and in the drainages. Grass, however, is said to be scarce.

A chain of large lagoons extends from the head of Seal Bay over to Vivonne Bay; and from the Table Hill, twelve have been numbered, which, however, are mostly dry in summer.

Nepean Bay, on the north-east coast, in

35° 33' S., 137° 41' E., the chief feature of the island, is a large and excellent harbour, protected by a long sand-spit, which forms a perfect breakwater. The first colonists for South Australia landed at Nepean bay, and formed a settlement called *Kingscote*, on the slope of some hills overlooking the harbour. The soil was found to be poor, being composed of sand left by the retiring sea, and a small portion of vegetable mould. After considerable expense had been incurred by the South Australian Company, in erecting buildings and making roads, the settlers removed to the mainland. The climate is neither so warm in summer nor so cold in winter, as at Adelaide; but the gales of wind are heavier, and there is less rain, in general, than falls on the adjacent coast.

The island derives its name from the number of kangaroos seen by its discoverer, Flinders, who with his party, in a single day, killed thirty-one animals, the least weighing 69 lbs., and the largest, 105 lbs.; they were so unaccustomed to the sight of men, whom, says Flinders, they probably mistook for seals, that in some cases they allowed themselves to be knocked on the head with sticks. The kangaroo and the seal seemed to dwell amicably together among the bushes on the grassy flats near the shores of the island. Mr. Leigh was informed by a deserter from a ship, who had been on the island twenty years, that so numerous were the kangaroos at the period of his arrival, that himself and another deserter, with the aid of two dogs, killed 800 of these beautiful animals in one month. This wanton slaughter took place for the sake of their skins, which the deserters sold to the crews of vessels calling at the island for salt and seals. It is no wonder that this singular animal is now scarce on Kangaroo island. The wallaby, opossum, bandicoot, and guana, abound, and venomous snakes, four to six feet long, may be seen winding in all directions through the matted scrub; the common brown Norway rat overruns the island, as does also the wild cat. The lagoons contain numerous pelicans, and the poem of the "*Pelican Island*," is stated to have originated in its author reading Flinders' description of Pelican lagoon, near Nepean bay. Kangaroo island has been, for many years, the resort of runaway men from the whaling ships, and of various whalers and sealers, who lived a lawless life, and made occasional forays to the mainland, where

they kidnapped the native women, and conveyed them to their island homes. One European lived twenty-two years near Nepean bay, somewhat after the manner of Robinson Crusoe. His native wife killed the last emu on the island, some years before the arrival of the South Australian Company's settlers, in 1836. No inconsiderable traffic was carried on by these lawless wanderers, in skins of seal, wallaby, and peltry of different kinds, and in supplying ships with fine salt, which is obtainable in unlimited quantities from the lagoons, where the crystals are deposited by the solar evaporation of the sea-water.

The good houses which were built at Kingscote are falling to decay, since the abandonment of the island by their proprietors, the South Australian Company; but as the harbour is unquestionably excellent, and the site of the town pretty, it may, probably, eventually form an agreeable summer watering-place for the citizens of Adelaide, who desire change of air and sea-bathing.

The harbour, however, of American river, and also a small bay five miles to the south-east of it, are considered by some persons to present superior advantages for a seaport town, there being an abundance of water at both these places, of which there is a deficiency at Nepean bay,* and as good, if not better soil.

To return to the coast line of the mainland, which from Cape Jervis trends in an easterly direction, forming the northern shore of *Backstairs Passage*, (in whose entrance lie three rocky islands, called the *Pages*,) and is marked by a line of hills, diminishing gradually towards *Encounter Bay*, the principal

* Mr. Robert Fisher, Dr. Slater, Mr. Osborne, and three other gentlemen, landed from the barque *Africaine*, Captain Duff, November 1st, 1836, near Morel's boat-harbour, between Capes Borda and Forbin, to travel overland to Nepean bay, whither the vessel in which they were passengers was bound, with emigrants to establish the colony of South Australia. The party were furnished with about two days' provisions, and six bottles of rum. They found the sun oppressively hot, the country hilly, and covered with dense prickly shrub, to penetrate which was very difficult; indeed they frequently had to chop their way through by means of a hatchet, which they fortunately had with them. The first three days of their travels they found fresh water plentiful, but after that time it was not obtainable. After nine days' perilous journeying and extreme hardships (for six days without water or food, except the flesh of half a dozen parroquets and the blood of a couple of sea gulls, shot during their excursion), Mr. Fisher, and three of his companions, reached the South Australian Company's settlement, at Port Nepean; Dr. Slater and Mr. Osborne were

scene of the shore whale fishery of South Australia. To this locality a degree of painful interest is attached from the dreadful disasters of which it has been the scene. The shore abounds in rocks and reefs, and the surf is represented by old captains as being worse than that at the Madras roads. The rollers rise to the height of fifteen or eighteen feet in one unbroken line as far as the eye can see, and as south winds prevail on this part of the Australian coast, it is only during the summer season, and after several days of northerly winds, that the sea subsides, and the roar of breakers moderates for a time. *Rosetta Head*, a lofty bluff, stretching out to seaward nearly at a right angle with the coast, forms the western side of Encounter bay. From its summit the whalers watch for their prey. Under the lee of Rosetta head is a small harbour also called *Rosetta*,† in honour of Mrs. Angas, which is separated by a rocky island named *Granite Island*, and a reef that is visible at low water, and connects Granite island with the mainland from Victor harbour. According to Captain Sturt, neither of these harbours are considered secure, although protected from all but south-east winds; and he mentions, on the authority of an experienced seaman, (whose name is not given) that under the lee of Freeman's Nob, and a small island off it, anchorage altogether preferable is to be found, as being more sheltered and having better holding ground. The capabilities of these harbours are however at present of comparatively little importance, but the rapid increase of colonization will probably soon render them of more immediate interest, and lead to their fuller examination.

unavoidably left behind, and both must have perished, as a party of native women and islanders sent in search of them were out sixteen days, but returned without succeeding in the object of their mission.

† It was in Rosetta harbour, during the early settlement of the colony, that the South Australian Company's ship, *South Australian*, was driven on shore and lost. The *John Pirie*, a strongly-built schooner, also belonging to the company, had well-nigh shared her fate. This little vessel was lying astern of the *Australian*, when she went ashore, with the reef close astern of her. In this fearful position her anchors began to drag, and her destruction appeared inevitable, when her commander, Captain Martin, determined on attempting to take her over the reef, it being high-water at the time. He accordingly cut his cable, set his sails, and ran his vessel on the rocks. Four times she struck, and was heaved as often over them, until at length she floated in the deeper water of Victor harbour, and found her safety under the lee of the very danger from which she had expected destruction.

At the eastern extremity of Encounter bay the junction of the Murray with the Southern Ocean takes place in 35° 32' S. lat., 138° 56' E. long. The aperture made by the impetuous stream in the dreary line of sand hills through which it forces its way is about a third of a mile in breadth, and when the river is flooded a strong current runs out of it with such rapidity, that the tide setting in at the same time, causes a short and bubbling sea. On its eastern side is a lake or lagoon called the *Goolwa*, (chiefly occupied by Hindmarsh island) which receives the waters of Finnis river and Currency creek. Lake Victoria is connected with Encounter bay by means of the channel of the Goolwa, now called *Port Pullen*, in compliment to the officer who by strenuous and persevering effort, succeeded in taking a small cutter through that narrow passage, and navigating her across Lake Victoria into the Murray river, as high as the settlement of Moorundi. Although the name of Port Pullen records a daring and successful enterprise, yet many melancholy associations are connected with this spot. Some years before, Sir John Jeffcott, the first judge of South Australia, and Captain Blenkinsopp, with two of their boat's crew, found a watery grave in attempting to pass from the Goolwa into Encounter bay, and the large sand hill which marks the eastern shore, is named *Barker's Knoll*, in memory of the brave officer, who after having left his companions and succeeded in swimming across the mouth of the Murray, there fell a victim to the superstitious fears of the Milmendura natives.

Lake Victoria (originally called *Alexandrina*), is estimated at from fifty to sixty miles in length, and from thirty to forty in breadth. At seven miles from the entrance of the Murray, its waters are brackish, at twenty-one miles across, perfectly salt, the force of the tide being there perceptible. Although, when viewed from the point of Pomundi, which projects into it from the south, it has the appearance of a clear and open sea, yet it is, after all, exceedingly shallow; its medium depth is only four feet, and it is rapidly filling up from the decay of seaweed, and the deposits brought into it yearly from the Murray. "No doubt," says Captain Sturt, "but that future generations will see that fine sheet of water confined to a comparatively narrow bed, and pursuing its course through a rich and extensive plain. When that shall be the case," he adds "and that the strength of

the Murray shall be brought to bear on one point only, it is probable its sea-mouth will become navigable."

Two small streams named the *Bremer* and the *Angas*, flow into Lake Victoria, which communicates at its south-eastern extremity with another lake, named *Lake Albert*, of about fifty miles in circumference, with a depth varying from four to ten feet. The water in Lake Albert is in some parts very good, in others, slightly brackish, but quite fit for use. From the sea-mouth of the Murray, a sandy coast, completely open to the ocean, stretches away to the south-east, forming the outer shore or sand-hills of the *Coorong*, a back-water of Lake Victoria and the Murray, which runs parallel with the sea for a distance of ninety miles, separated only by a ridge of sand-hills, some of which are from 300 to 400 feet in height, with a breadth varying from half-a-mile to a mile and-a-half. Its waters are salt; its average breadth about two miles. The inner shores (which appear to have been originally the boundary of the ocean) are broken with numerous rocky promontories, and shallow sandy bays indent its margin; towards the sea, the hills of sand rise in stupendous masses, forming a long and dreary peninsula, against which the surf of the southern ocean beats with unceasing violence. In some places the sand is so white, as to resemble snow, and contrasts strongly with the shrubs growing on these hills, which are of deep green. The *Coorong* terminates in a series of salt lagoons, after passing successive swamps intersected by belts of grassy soil and low hills, scattered over with casuarina and a variety of smaller shrubs; near its eastern extremity, a stream called *Salt Creek*, flows out of it, running through the desert country to the eastward. The *Coorong* is the resort of myriads of waterfowl, which in some places are so numerous, as to darken its surface; black swans, pelicans, ducks, teal, and shags, breed in perfect security amid its profound solitudes. Shell-fish and mullet abound in its waters, and the monterry, or native apple, grows in every direction over the bleak and desolate mountains of sand that form a barrier from the fury of the ocean.*

The termination of the *Coorong* is marked by a low granite range constituting a watershed, throwing the drainage to the north and south, respectively; from the shore a protruding mass of granite, about twenty

* *Australia Illustrated*, by G. F. Angas.

or twenty-five feet high, forms a bold point in a long, straight line of coast, and was mistaken for a cape by M. Baudin, who called it *Cape Morad-de-Galles*. This rock projects but a few feet; there is, however, from this point, a sunken granite reef jutting into the sea, apparently connected with the rocks that break the water in Lacépède bay, an inlet immediately beyond, which, it is supposed, will be found to afford sheltered anchorage to small vessels, even in the winter season.

From *Cape Bernouilli*, or *Jaffa*, a remarkable projection to the south of Lacépède Bay, reefs extend for a considerable distance. Many disastrous shipwrecks have occurred in its vicinity; among them, that of the *Maria*, whose unhappy passengers and crew—such of them, at least, as escaped the perils of the sea—met a yet more melancholy death; for after toiling along the dreary shores of the Coorong, under a burning sun, for nearly ninety miles, they were ruthlessly massacred by the Milmendura natives.

From Cape Bernouilli a ledge of rocks extends for ten or twelve miles towards *Godfrey Island*, which lies in the centre of *Guichen Bay*, a valuable outlet for the province, and a much-needed port of refuge, affording good anchorage, safe during every wind. From its south point (*Cape Dombey*) a ridge of rocks extends, which serves as a breakwater for the outside swell. A township was laid out here, in 1846, called *Robe Town*; and another, named *Grey Town*, was formed at *Rivoli bay*, about the same time. The shores between these bays are bordered by lakes or lagoons; which, however, do not communicate with the sea. The first of these—the nearest, that is, to *Guichen Bay*—named *Lake Hawdon*, cannot rightly be called a lake, being merely a flat swampy plain, which in the rainy season is covered with water. *Lake Eliza* and *Lake George*, both of considerable size, are separated from each other only by a narrow strip of land.

Rivoli Bay is a good haven, but, from its exposure to south-west winds, is not considered to afford proper shelter for square-rigged vessels. *Penguin Island*, so named from the vast number of penguins found there, lies off *Cape Martin*, the northern extremity of *Rivoli bay*; the southern, *Cape Lannes*, is, I believe, identical with the *Cape Buffon* of the French.

Immediately behind *Cape Lannes*, *Lake Frome* stretches southward towards *Lake Bon-*

ney, a very extensive sheet of water, divided from the sea by a line of sand-hills.

Destaing Bay lies to the south of *Lake Bonney*; from thence the coast trends in a south-easterly direction to *Cape Northumberland*, in $38^{\circ} 4' \text{ S. lat.}$, $140^{\circ} 42' 33'' \text{ E. long.}$, when it turns to the east, presenting no feature worthy of notice between that point and its termination, a little to the westward of the mouth of the *Glenelg*.

MOUNTAINS.—Although the province of South Australia contains several continuous ranges of high land, it has none of any great elevation, the loftiest not much exceeding 3,000 feet. The *Mount Lofty range* stretches from *Cape Jervis*, along the east shore of *Gulf St. Vincent*, to the northward for about forty miles, there attaining an elevation of 2,334 feet. From this point a chain branches off to the westward, but the main range continues to run up towards the interior, into which Captain Sturt considers that it cannot extend far, or he must have seen something of it during his interior exploration. Captain Frome, in the map accompanying the account of his expedition of 1842, clearly connects it with the ranges traced by Eyre to their termination in *Mount Hopeless*, within the limits encircled by *Lake Torrens*, and speaks of the direction of what he terms "the dividing ridge between the basin of the Murray and the interior or desert plain, as generally about north-east from the highest point north of *Mount Bryan* (the *Black Rock Hills*, in about $32^{\circ} 45' \text{ S. lat.}$), gradually decreasing in elevation, and, if possible, increasing in barrenness." The summits of these hills were found to be invariably rock, generally sandstone; the lower slopes covered with dense brush, and the valleys with low scrub, with occasional small patches of thin wiry grass. At the highest points of elevation from *Mount Bryan* northward, igneous rocks, of basaltic character, exhibit rugged and fantastic outlines;—in about $81^{\circ} \text{ S. lat.}$ marked indications of volcanic action have been found, and several hollows resembling small craters of extinct volcanoes, near one of which a warm spring was discovered, temperature 76° Fahr. , atmosphere 54° .

The principal summits of this range, viz., the *Razor Back*, *Mount Bryan* (to the south of which is the great *Burra-Burra mine*), and the *Black Rock Hill*, rise to the height of 2,992, 3,012, and 2,750 feet respectively.

The more western branch of the chain, sometimes called *Flinders' range*, follows the

eastern side of the head of Spencer's gulf; thence it runs nearly parallel with the inner shore of Lake Torrens for a very considerable distance, its most northerly extremity being, according to Eyre, *Mount Hopeless*, a low haycock-like peak, in $29^{\circ} 30' S.$ lat., beyond which he describes the horizon as presenting one low uninterrupted level; the hopeless nature of the adjacent country being too clearly evidenced by the existence of numerous brine-springs.

Mount Serle, a very prominent eminence, is situated about ninety miles to the south-west of Mount Hopeless. Mr. Eyre considered that it could not be less than 3,000 feet in height; but, from an accident which had occurred to his barometer, was unable to ascertain it with accuracy.

To the east of Mount Serle, and connected with the main range by low long spurs, is a ridge named *Mount Deception*, from the fallacious expectations raised by its height (which to all appearance could not be less than 3,000 feet), of finding permanent water in its vicinity. Its summit was found to be attainable only by winding along the steep and stony ridges leading round the deep gorges and ravines by which it is encircled.

The other principal peaks in Flinders' range are, *Mount Arden*, *Mount Brown*, and *Mount Remarkable*, so named by Captain Flinders. Mr. Eyre, speaking of Flinders' range between Mount Arden and Crystal Brook, a distance of about eighty miles, says that the character of the range varies but little. High, rocky, and barren, it rises abruptly from the level country at its base, the slopes to the westward being steep and precipitous, very hard, and ringing like metal when struck with a hammer. The hills have no other vegetation than prickly grass, and are in many instances so coated over with loose stones as to render their ascent, from the steepness of the declivity, dangerous, if not impossible.

To return to the Mount Lofty range, the high land between it and the Murray is ably described by Colonel Gawler, in his *Geographical Notes*, as the *Mount Barker*, or *Great Ironstone*, and the *Mount Wakefield* ranges; and although myself disposed to consider the whole, including that just described, as forming one great mountain mass, and not properly divisible into distinct formations, I yet give the following abstract of Colonel Gawler's statement, as affording valuable information on the subject.

The summit of Mount Barker itself, is

about twenty feet higher than Mount Lofty. This elevation, however, is only continued for about a mile in length, by from fifty to one hundred miles in width. Beyond these limits the ground on all sides drops suddenly for 800 feet, Mount Barker rising like an isolated hill from the great table-land beneath it. This table-land is about 1,600 feet above the level of the sea. It runs in a broad belt parallel to the Mount Lofty range; its surface, presenting beautiful undulations of lightly-wooded low hills and gentle valleys. At from ten to fifteen miles south-west of Mount Barker, it falls rather suddenly to about 1,200 feet, and becomes covered with a stringy bark forest. From ten to twenty further, in the same direction, sharp, precipitous ridges, some of them attaining an elevation of from 1,800 to 2,000 feet, cross it in different directions. Between these, still upon high table-land, are formed the rich valleys of the Myponga, the Upper Finniss, and other streams, flowing severally to the westward, eastward, and southward. Immediately afterwards, entering along the range, still to the south-west, huge branches strike off to the sea, and from heights of from 1,200 to 1,500 feet, fall precipitously into it, along the line of coast which extends from Mount Terrible, the southern boundary of the Aldingha Plains, to Yankalilla. Other large branches shoot off from Myponga to the eastward of south, and fall with a more gentle descent towards the great bend of the Lower Murray, in the neighbourhood of Currency creek.

Mount Wakefield can scarcely be considered as distinct from the Mount Barker range; it is rather a mighty disruption from its south-western extremity. Between the two, for twenty-five miles from Yankalilla, in Gulf St. Vincent, to the mouth of the Inman, in Encounter bay, runs a very lovely valley varying from about six to two miles in width, well watered, and rich in soil adapted for agriculture, and in herbage for pasturage. In this valley are situated *Division Hills*, which separate the waters flowing into Gulf St. Vincent from those falling into Lake Victoria and the Lower Murray. Their summits are clothed with pastures, and their height is not above 800 feet above the sea, while that of the precipitous mountains which bound the valleys to the north and south, is from 1,200 to nearly 2,000.

The summit of the Mount Lofty range is narrow; it seldom exceeds a quarter of a

mile in width; that of the Mount Barker range, on the contrary, maintains a breadth of from six to ten miles, and though hills and ridges frequently intersect it, their elevation above the general summit is small, as compared with its height above the level of the sea.

Between the summits and the great valleys at the base, both in the Mount Lofty and Mount Barker ranges, runs a belt frequently from three to four miles in width, of very thickset, narrow, and tortuous spurs. These form, at first sight, the greatest obstacles in the way of practicable roads; but, on a close research, good passes over them may almost everywhere be found. The small valleys between these spurs are often very rich and well watered. The lower slopes of all these mountain ranges are almost everywhere composed of slate, the surface above the slate being always grassy. The summit of Mount Lofty is capped with a highly ferruginous sandstone, and large portions of the Mount Barker range with a conglomerate of ironstone and angular pieces of quartz; upon both formations Colonel Gawler declares himself to have invariably found stringy bark, forest, or brush.*

The heights termed the *Barossa Range*, about thirty miles to the north-east of Adelaide, form an undulating hilly country, lightly wooded, comprising several rich and picturesque valleys. The *Keizerstuhl*, the highest point in the range, has a beautiful outline, and the stream called the Rhine flows northward, through the pretty town of Bethany, where the German colonists have located, and given the names of several places in their fatherland to the more distinguishing features in the country around. The *Belvedere*, *Heranian*, *Hawdon*, and other surrounding minor ranges, do not present any very prominent features, but they offer much pleasing scenery.

A considerable portion of the peninsula which forms the south-western shore of Spencer's gulf, is occupied by a mountainous table-land, about 1,300 feet above the level of the sea, whose surface is traversed by many short and narrow mountain ridges, from 300 to 700 feet in elevation above it. From *Mount Olinthus*, situated thirteen miles from Franklin harbour, which attains a height of 2,000 feet, the view is magnificent, embracing, to the north-west, the whole course of the table-land for twenty-five or

thirty miles, with many peaks at much greater distances; the north-east and east, *Middleback Mountain*, which is an offset from the table-land, the upper part of Spencer's gulf, with the mountains beyond it, and the coast further than Point Riley; to the south-east, Point Pearce and Wardang island; and to the south-west, the immense tracts of low undulating country, as far as *Mount Hill* (*Flinders' High Bluff*), an isolated peak about 1,500 feet high, forty-six miles north-north-east from Port Lincoln.†

Marble Range, about thirty miles north-west of Boston bay, rises abruptly, and when its steep sides of quartz receive the evening sun, it appears as if inlaid with diamonds. In the distance, to the north, another mountain range is visible, consisting of abrupt, lofty cones, the most remarkable of which, *Albert Peak*, is visible for a considerable distance. *Mounts Dutton* and *Greenly* are also seen to the west, beyond the Marble range, and the high sand-hills of Coffin's bay shut out the scene to the south.

To the north of Eyria Peninsula, between Mount Arden and Streaky bay, a singularly rugged and barren range, of about 2,000 feet in height, extends for a considerable distance. The succession of detached ridges forming *Gawler Range*, consists entirely of porphyritic granite, the front slopes exceedingly steep, and covered by small loose stones, and without either timber or shrubs. From the whole range, not a stream or water-course was found to emanate, the only water obtainable in its vicinity being afforded by the deposits left by very recent rains. The adjacent country is equally sterile and arid, the soil being in many places saline, with several salt lakes, but affording no indications of fresh water or springs.

Baxter Range, to the east of Gawler range, is high and rocky, rising abruptly out of the plains. It is distinctly visible from Mount Arden, from which it is about fifty miles distant. Its formation is entirely conglomerate, of rather a coarse description. Fresh water and good grass abound in its vicinity.‡

The country to the east and south of Lake Victoria is not marked by a coast range of mountains, running parallel to the Pacific like the "Blue Mountains" of New South Wales; there are, indeed, only a few eminences, that appear to be continuations of the parallel ridges which mark the Australian formations, and, so far as we know

* Colonel Gawler's *Geographical Notes*. † Ibid.

‡ *Eyre's Expeditions into Australia* 1841.

throughout the whole island-continent have generally a direction from south to north.

Mount Benson, a round-topped eminence, with an elevation of 700 feet above the sea, is the highest of a range of limestone hills visible from the sand hills at Lacépède bay. The view from the summit is that of "a sea of woods," with the blue plains melting away into the invisible distance.

Mounts Gambier and *Schanck*, eight miles apart, at a short distance from the coast, near Glenelg river, are volcanic cones. *Mount Schanck*, the nearest to the sea, rises at an angle of about 45° for 600 feet, from a comparatively level country, and attains an altitude of nearly 900 feet above the ocean. The interior of the mountain is one vast hollow basin, upwards of two miles in circumference, and so deep that the trees growing in the rich soil of the lower depths of the crater, appear like minute shrubs dotted over its surface. The outer side of the cone is clothed with grass, scattered over with "she oak" trees. The rim or outer edge of the crater is stated by Mr. Angas to be not more than a couple of yards in breadth. Mr. Burr says there are three distinct craters; the principal one is 500 yards in diameter; another to the east about one-third as high as the principal, and 200 yards across; and a third crater to the south is rather more elevated than the east, and 250 yards wide. The small craters are on the slope of the main crater, nearly circular, devoid of water, and covered with rich vegetation on the inner and outer slopes. The view from the rim of the main crater is very extensive, commanding the windings of the Glenelg river and the curves of Bridgewater and Discovery bays in Victoria province. At the base of the mountain to the north there are circular limestone basins, and the country around presents heaps of black cellular lava. To the south-east and south-west there is a large mass of cellular wacke, forming a wall six to eight feet in height, and appearing as if it had at one time formed a sea beach. Governor Grey and his party, when riding round the foot of the mountain, noticed particularly to the south-east a hollow sound, as if there were a vault beneath them.

Mount Gambier is rather higher than *Mount Schanck*, of an oval form, 600 yards long, by 120 yards broad, the largest diameter in a direction nearly east-south-east. Mr. Angas says, the foot of the mountain exhibits the walls of three distinct craters, each containing a lake of water. Mr. Burr

states, that about one-third of the east portion of the crater forms a lake with high perpendicular cliffs, except to the west, where it is bounded by a gently sloping hill running nearly north and south across the crater, and dividing it into nearly two equal portions. The western portion of the crater has several lagoons, which contain water. The depth of the central lake of the crater is very great, the water good, and frequented by numerous wild ducks.

Mr. Angas expresses his "rapturous admiration of the glorious and enchanting scene," which the sudden view of the largest crater presented, when he reached the summit of the mountain; a vast hollow basin was, as it were, shut out from the world by the walls of lava that surrounded it, and covered with emerald verdure, burnished to a bright metallic green by the golden tints of evening; small hills, like miniature craters, interspersed among plains and valleys, carpeted with grass of velvet smoothness, scattered with a few blackwood or mimosa trees, form one portion of this enchanting dell. At its western extremity, terrace above terrace rises along the sides of the mountain, with occasional caverns of red lava. The deep, still lake, with its black-looking waters, is surrounded by lofty cliffs of pure white coral. The country between the two mountains is very rich, and the scenery beautiful.

Governor Grey discovered at the foot of *Mount Schanck* several caves containing numerous organic remains, with bones of the emu, gigantic species of kangaroo, and a tooth which must have belonged to a marsupial animal of gigantic size.

A low ridge to the north-west connects *Mount Gambier* with the *Mount Burr* range, which has an elevation of about 1,600 feet, and is generally steep to the south-south-west and west; but on the opposite side the ascent is very gradual. The country around appears to be of the most promising description for the settler.

RIVERS.—There are but few streams within the limits of South Australia which deserve the name of rivers, either from the length of their course or the body of water they contain, by far the larger portion being for the greater part of the year merely chains of ponds. Their channels however are generally of considerable depth; and though frequently almost dry in the hot season, a mighty flood rushes along during winter; as is shown by the residue of sticks, scum,

and grass, left in the branches of the gum trees that line their course, for many feet above the supposed ordinary height of the stream. Nevertheless the province is by no means so deficient in its supply of water as is frequently supposed, for even after its streams have almost or quite ceased running, abundance remains in the pools, many of which from their temperature and other causes, appear to be supplied by springs and under-currents. Even in places where no surface-water can be found, wells may be sunk, as good water is almost invariably found at depths varying from eighteen to sixty or eighty feet. The absence of surface-water is however naturally looked upon as a serious defect, and at Port Adelaide was doubtless the chief reason for which the town was built away from the harbour; but a well has lately been dug within 100 yards of high-water mark, where, at a depth of only a few feet, excellent water has been obtained in sufficient quantity for the uses of the whole population, and the shipping which frequent the port.*

The one striking exception to the usual insignificant character of the South Australian rivers is formed by the noble *Murray*, the upper portion of whose course, under the denomination of the *Hume*, we have already traced to its junction of the *Murrumbidgee*, river (see pages 585 and 586). From thence to the confluence of the *Darling* the *Murray* passes through a barren and unpromising country, where, excepting on its immediate banks, neither water nor food can be obtained. Boundless plains of sandy soil, covered with *salsolacæ*, extend to the north and south, alternating with brush and forest land. A little below the *Darling* (on the left bank of the *Murray*) a succession of lagoons occur, backing flats of considerable extent, clothed with nutritious herbage, but the plains to the northward preserve the same sandy and barren character for many miles. On the right bank of the *Murray* is the junction of the ana-branch or ancient channel of the *Darling*, and on the same bank, more to the eastward, are two lakes (*Victoria* and *Bonney*), situated a few miles from the left bank of the *Murray*,† whose surplus waters they receive by means of their respective channels, the *Rufus* and the *Hawker*. By this distribution of its waters the floods of the *Murray* are prevented from being ex-

cessive, or rising above a certain height. Between the lakes above mentioned, and especially in the vicinity of a little sandy peak named *Mount Misery*, the country is described in very unfavourable terms, the river itself being flanked by high level plains on both sides, while cliffs of 100 or 120 feet in height, composed of clay and sand, rise above the stream, their faces presenting the appearance of fretwork, so deeply and delicately have they been grooved out by rains. The soil of this upper table-land is a ferruginous clay and sand. The vegetation is chiefly *salsolaceous*, with scattered tufts of grass.

In 34° 9' 56" S. lat., an extraordinary change takes place in the bed of the river; for at this point commences the great fossil formation, through which the *Murray* flows during the remainder of its course.

The following interesting particulars respecting the river and its singular channel, are given on the authority of Governor Gawler and Captain Sturt; the geological formation of the latter will be described in its proper place.

In 34° S. lat., the river makes the decided bend to the southward, commonly termed the Great Bend, angle, or elbow of the *Murray*, and from thence continues in a southerly direction to its entrance in *Lake Victoria*; its banks, meanwhile, being characterised by a broad line of scrub called the *Murray belt*, composed of a thick brush of slender trees, shrubs, and bushes. When the surface is sandy, the pine predominates; when otherwise, *eucalypti*, *exocarpi*, *acacia*, and a large variety of others, many of them very beautiful. On the western side of the bank this brush is generally from fifteen to twenty miles in breadth. On the same bank a stripe of open ground usually intervenes between the brush and the valley of the river, covered with grass and *salsolacæ*. North of the Great Bend, the brush almost wholly disappears, and the open ground spreads out into enormous plains, from sixty-five to eighty miles in length from north to south, and to the eastward extending to the limits of vision. If water could be procured, these plains, and the mountains which bound them, would be good sheep pastures.

The most remarkable feature of the surface of the great fossil formation, is its want of water-courses and water. Along the im-

* Bennett's *South Australia*.

† At page 384 mention was made, on the authority of Captain Sturt, of a supposed tributary of the *Mur-*

ray, named the *Lindesay*, which has subsequently proved to be only an ana-branch of the *Murray* itself.

mediate banks of the Murray, water has worked out deep gullies, but these are very short. Generally, the rain appears to lodge on its surface in very numerous shallow patches, and to be carried off by evaporation. The valley of the Murray, in its whole length,—*i. e.*, for about 200 miles—in South Australia, is a hollow cut through this great fossil formation, to nearly the depth of the level of the sea, so that the hills and cliffs of either bank rise sometimes close to the margin of the river, sometimes at distances of one or two miles from it, to an elevation of about 300 feet. The scenery is rendered peculiarly attractive by the bold outline of the cliffs, whose colour varies from a light shade of yellow to a deep ochre.

The valley itself, in its whole course, is from three-quarters of a mile to two miles in width—the more general width being about a mile and-a-quarter. The river flowing through it, is from 100 to 250 yards in width, the more general breadth being between 150 and 200. Immediately above its entrance into Lake Victoria, it is 170 yards wide, fresh, and very deep. The least depth that has been observed between the Great Bend and Pomunda (the western point marking the mouth of the river), was twelve feet; but such comparative shallows are very rare. The river varies, during this portion of its course, to depths of forty feet, retaining the latter for a long distance, before joining the lake. The deep water in general holds very close to the banks. The flow of the current is about a mile an hour, immediately above the Bend; from a mile to a mile and-three-quarters, for two-thirds of the distance, towards the mouth; and for the remaining third, about half-a-mile. The long lines of hills and cliffs which bound the Murray valley, maintain throughout a rough parallelism to each other, but the river scarcely ever preserves an equal course between them. It sweeps continually in magnificent reaches, from side to side, forming perpendicular cliffs wherever it strikes the hills, and encircling never-ceasing flats of from half-a-mile to four or five miles in length.

The formation of these flats is remarkable. It is evident, that at a very distant period, the whole breadth of the valley was covered by water. After this, by degrees, the current striking against a cliff, and flying off towards the opposite side of the valley, left between it and the cliff a bank of detritus. This bank, for some distance, has occupied the whole space between the

strong current and the cliff. Continuing onward, a back-water was formed between the detritus and the cliff, and the bank has been carried on in a long narrow stripe between the strong current on the one hand, and the back-water on the other, until the river, striking against the opposite cliff, and returning again, after a long sweep, to the side first alluded to, formed a great semicircular flat, with a stripe of detritus as an outer embankment between it and the strong current, and a large back-water lake in the centre of the flat, communicating with the river by a narrow channel at its lower extremity. These back-water lakes have been gradually filled by alluvial deposition; most of them are now above the level of the river, and are covered with a light but excellent soil. The soil of the detritus banks is of course inferior; it is composed of the lime and sand of the cliffs, with some vegetable alluvium. Wherever the flats are fully formed, the margins of the river and back-water lakes are mostly lined with very fine flooded gum-trees, and a considerable part of the remaining solid ground with the box-tree.

The order of the formation of these flats has been most regularly successive. Those at and above the Great Bend are perfectly formed; their detritus banks are nearly twenty feet above the level of the stream, and clothed with magnificent gum-trees of all ages, while reeds have nearly disappeared from the soil. Proceeding downwards, the detritus banks very gradually diminish in height, reeds become numerous, and gum-trees thinly scattered; until at length, in the lower part of the stream, trees disappear, and the flats become vast expanses of reeds; the last of them, that within four miles of Pomunda, retaining its long stripe of detritus bank, and its back-water lake, in such extensive dimensions, that navigators with the stream would mistake the back-water lake for the river.

Captain Sturt, describing the Lower Murray and the Upper Murray, or Hume, as one river, says, "the heads of its immediate tributaries extend from the thirty-sixth to the thirty-second parallel of latitude, and over two degrees of longitude; that is to say, from the 146th to the 148th meridian; but, independently of these, it receives the whole westerly drainage of the interior from the Darling downwards. Taking its windings into account, the length of the Murray cannot be less than from

1,300 to 1,500 miles. Its rise and fall are both gradual. It receives the first addition to its waters from the eastward, in the month of July, and rises at the rate of an inch a day until December, in which month it attains a height of about seventeen feet above its lowest or winter level. As it rises, it fills in succession all its lateral creeks and lagoons, and it ultimately lays many of its flats under water. The natives look to this periodical overflow of their river with as much anxiety as did ever or do now the Egyptians to the overflowing of the Nile. To both they are the bountiful dispensation of a beneficent Creator; for as the sacred stream rewards the husbandman with a double harvest, so does the Murray replenish the exhausted reservoirs of the poor children of the desert with numberless fish, and resuscitates myriads of crayfish that had long lain dormant underground; without which supply of food, and the flocks of wild fowl that at the same time cover the creeks and lagoons, it is more than probable the first navigators of the Murray would not have heard a human voice along its banks."

As a line of communication between distant colonies, the Murray is of great and indisputable importance. Captain Sturt considers that, as a commercial river, it will not be of practical utility, because it runs for more than five degrees of latitude through a desert, is tortuous in its course, in many places much encumbered with timber, and its depth entirely depends upon the seasons. Other authorities, however, entertain a different opinion on the subject, and deem the Murray navigable at certain seasons for a considerable portion of its course; and, consequently, likely to facilitate internal transit very materially, notwithstanding the evident non-navigability of its sea-mouth, and the impossibility of a vessel entering it from the ocean, except in unusually calm weather, from the united force of the current and the immense sweep of rollers, which rise and break for the distance of a couple of miles before the entrance to the mouth of the river is attained.

Before leaving the Murray, we must not omit noticing the "Murray cod" of the colonists, a beautiful and well-flavoured fish, caught at certain seasons in considerable quantity; the general size varying from 15 lbs. to 25 lbs., but frequently much larger. Captain Sturt mentions having seen one, caught by Mr. Scott (the successor of Mr. Eyre at the Protectorate station at

Moorundi), that weighed 72 lbs. Large numbers of a smaller but better kind, about twelve inches in length, resembling the English perch, have recently been taken with nets. While the waters of the Murray are thus occupied, its banks are enlivened by numerous flights of the crested pigeon, the cockatoo, and a vast variety of parrots, whose brilliant plumage contrasts charmingly with the fine gum-trees, which form one of the most pleasing characteristics of this noble stream.

The other streams at present known in South Australia are, the *Inman*, *Hindmarsh*, *Currency Creek*, *Finniss*, *Angas*, and *Bremer*, falling into Encounter Bay and Lake Alexandrina; the *Yankalilla*, *Curricalinga*, *Myponga*, *Onkaparinga*, *Sturt*, *Torrens*, *Upper* and *Lower Para*, *Gawler*, *Hutt*, *Light*, *Wakefield*, and *Rhine*, falling into or running towards Gulf St. Vincent, and the *Broughton*, *Dutton*, and several small streams falling into or flowing toward Spencer's gulf. Not any of these are of sufficient importance to need any detailed notice in this place, especially as many of them will be mentioned in the description of the districts to which they respectively belong.

LAKES.—The known lakes of this province, like its rivers, form but a meagre catalogue; yet, among them are comprised two names already familiar to my readers, to which considerable interest attaches, i.e. *Lake Victoria* or *Alexandrina*, the large shallow lagoon recently described as the receptacle of the Murray river, and *Lake Torrens*, that huge and strangely-shaped basin which strikes the eye as so remarkable a feature in the map of the island-continent of Australia.

Lake Torrens, also, we have before had occasion to describe, in relating the explorations of Mr. Eyre (p. 385). It appears formerly to have communicated with Spencer's gulf, and, indeed, is still connected with the head of the gulf by a channel now filled up, but soft and boggy, in places containing salt water mixed with the mud. The lake extends in the form of a horse-shoe over a circuit of at least 400 miles, encircling the numerous ridges of moderate elevation, which form the northern extremity of Flinders' range, and receiving the whole drainage from them. The apparent breadth of the lake has been before stated, on the authority of Mr. Eyre, who traced its shores on the western side of Flinders' range for 200 miles, to be from twenty to thirty miles; while Sturt, who visited its north-eastern portion in 1845, mentions it as only

from ten to twelve miles across. The deceptive appearances caused by mirage and refraction, on its shores, are most extraordinary, and render the evidence of vision very insufficient. Eyre made various attempts to cross the lake, and on one occasion, penetrated into the basin for about six miles, but was always compelled to retreat, by the increasing softness of the mud; once, only, did he succeed in tasting its waters, in a small arm near its most north-westerly portion, and here they were perfectly clear, about two feet deep, as salt as the sea, and of the same greenish hue. The south-eastern portion of the bed of the lake is stated by Captain Frome to be quite dry, and "more properly a desert, than a lake."*

To *Lake Albert*, which is connected with Lake Victoria, Lake Bonney, and other lakes and lagoons mentioned in tracing the coast-line of this province, we need not again refer.

Of the two pretty inland lakes connected with the Murray, named *Victoria* and *Bonney*, the former is about twenty-four miles in circumference, very shallow, and at times nearly dry; the tortuous channel called the *Rufus*, by which it receives the surplus waters of the Murray, is about eight miles long. Lake Bonney is ten miles in circumference and very shallow, and is supplied solely from the Murray; but its channel,—the *Hawker*, which, taking its windings, is about six miles in length—being too small to discharge the water equally with the fall of the river, has a current in it, at certain times, which gives it the appearance of a tributary, rather than merely a recipient.

TOPOGRAPHY—Settled Districts.—The chief portion of the province at present divided into counties, is situated between St. Vincent's gulf and the Murray, on the east and west, and between Broughton river and Encounter bay, on the north and south. These

* A striking contrariety exists between the accounts given of different portions of the lake by Mr. Eyre and Captain Frome, the former describing it from close examination on the west side of Flinders' range, as girded throughout by a steep ridge, like a sea shore from which you descend into a basin, certainly not above the level of the sea, possibly even below it, the whole bed being composed of mud and water; while Captain Frome, who visited its south-eastern extremity, declares it to be "rather a desert than a lake, consisting of loose drifting sand and low sandy ridges, very scantily clothed with stunted scrub on their summits." Mr. Eyre considers that Captain Frome had not reached the basin of Lake Torrens—first, because of the manner in which the drainage is thrown off from the east side of Flinders' range, and the direc-

counties (eight in number) were established in 1845. That which first claims our notice, as containing the capital of the province, named,—

Adelaide County, is bounded† on the east, by Gulf St. Vincent; on the south, by the county of Hindmarsh, as far east as Mount Barker; thence by a line continuing along the main range to the division of the waters between the Gawler and the Rhine, and following the creek Moorooroo (Jacob's creek), to its junction with the Gawler, that river then forming the northern boundary to the sea-shore, not including, however, the portion of the Gawler special survey laid out on its left bank.

The *City of Adelaide* is situated about midway between the northern and southern extremities of Adelaide county, in 34° 57' S. lat., 138° 38' E. long. Although now an episcopal see, as well as a corporate city, possessed of the rights and responsibilities attaching to ecclesiastical and corporate power, it is not yet fifteen years old, for the first intending settlers reached the shores of Gulf St. Vincent the 27th July, 1836, not knowing where they were to locate themselves, for the territory on which they landed had never before been trodden by the white man; but was the abode of the kangaroo and emu, and roamed over by tribes of wandering savages in quest of food. The measures which were taken for selecting the site of the capital of the colony, have been previously stated; but the misunderstanding between Colonel Light and the governor, respecting the position chosen by the former, and the incompetency of several of the assistant-surveyors sent out, caused considerable delay in preparing the lands for selection; much disappointment was experienced by the settlers who had paid in money in England, and expected to be put in immediate possession of the land on their arrival. Until this was done, some

tion which the watercourses take to the north-east or north; secondly, because an apparent connection is traceable in the course of the lake from the heights in Flinders' range, nearly all the way round it; thirdly, because the loose sands and low sandy ridges, crowned with scrub, mentioned by Captain Frome, are very similar to those met with near Lake Torrens on the west side, before arriving at its basin.

† The boundaries of this and of the other counties of South Australia, are chiefly cited from the proclamation of the local government, by which they were fixed; they are, perhaps, somewhat too minutely stated for the general reader, but the accurate topographical information thus incidentally conveyed, will, I think, make amends for that defect.

of the new comers remained at Nepean bay, in Kangaroo island; but the greater part pitched their tents on a plain, subsequently called Glenelg, close to the beach, at Holdfast bay, there to await the completion of the survey. When the site of the capital was fixed, most of the emigrants removed thither; but, as the allotments were not yet laid out, and the question of priority of choice was to be settled by a lottery, the adventurers were under the necessity of forming another temporary encampment, and the banks of the Torrens river were soon lined with huts erected from the materials most readily procurable; some being constructed of mud and interlaced branches, termed "wattle and daub;" others of turf, of brushwood, or of reeds, and for a roof, thatch, or a piece of canvass, was used. A few had tents, or wooden houses, made in England; fire-places were, fortunately, not essential, but several huts had an opening at one end, enclosed on three sides with stone slabs, and a pork-barrel deprived of its ends, for a chimney; outside the huts a blazing fire was kept, with a huge pot swung over it, gipsy fashion. These primitive structures afford a good idea of the aptness with which Englishmen and *Englishwomen* accommodate themselves to the exigencies of a novel and trying position, and of the speed with which they establish something even of comfort around them, under the most unpromising circumstances. Five months elapsed between the arrival of the first emigrants and that of Governor Hindmarsh; meanwhile, they would have been totally without law or government, had not a strong sense of mingled justice and expediency urged them to establish an authority and to obey its dictates. Indeed, the early settlers appear to have manifested a great deal of sound common sense in their proceedings; to use a colonial expression, each one soon began "to shake down" into his proper position, and orderly communities were established, first at Nepean bay, and afterwards, at Holdfast bay, even before the arrival of the governor.

In January, (27) 1837, Mr. Edward Stephens, then dwelling at Glenelg Plains, addressed a circular "to the purchasers of the first sections of land in South Australia," urging their assembling to examine the proposed site of the chief town on the Torrens, and to remove all doubt or question as to the superiority of the place. On 2nd February, 1837, an address was presented

to the governor, signed by eight gentlemen, requesting that a public meeting might be called on the subject. This was accordingly done on the 10th February, when a motion was carried by 218 land-order votes to 137, in favour of the position on the Torrens chosen by Colonel Light, and it was declared that he had "most ably and judiciously discharged the responsible duty assigned him by the South Australian Commissioners."

In March, 1837, the survey of the town lands was completed; the selections were made by those who brought land orders from England, and the remainder were sold to the highest bidder, the prices varying from £2 to £20 per acre; the average price was £5 per acre. Within the ensuing three years, some of the parties who had purchased at these prices, sold their lots at £200 to £2,000 per acre. The site chosen for the new city, named after the excellent Queen Adelaide, was on a sloping ground, with grassy flats and umbrageous trees, on the north and south banks of the Torrens river, about six miles from Port Adelaide, on the east side of Gulf St. Vincent, and about six miles from Mount Lofty, the beautiful hilly range before described. The portion of the city on the south side of the river comprises 700 acres, and is nearly level; that on the north side contains 342 acres, and is elevated, so as to afford a fine view of the surrounding country, embracing to the eastward the darkly wooded valley of the river, and the peaks and elevations of the Mount Lofty range, with the lighter wooded country at its base; to the eastward commanding the whole extent of the Adelaide plains. The activity of the colonists, when they became certain of the site of their city, was soon visible. In June, 1837, it was noticed in the *South Australian Gazette*, that the good citizens were fast emerging from the semi-savage state of life which was at first inevitable; "a cottage planted and fenced round with a substantial English iron fence, a roof adorned with a cupola, surmounted with a weather-vane, and a door, too, graced with a handsome knocker," belonging to Mr. Osmond Gilles, the colonial treasurer, triumphantly proved the progress of civilization. During December, 1837, Mr. Morphet remarked that the small park land was being cleared of temporary erections, and that dwellings were being constructed of a superior order, all in the cottage style. They were built some feet from the front lines of the

streets, in order that they might serve for out-houses and offices, when more substantial edifices were erected. A Government House was constructed by the seamen of H.M.S. *Buffalo*, and consisted of mud put between laths, supported by wooden up-rights, and covered with thatch. The sailors omitted, in "rigging the house," to place a fire-place or chimney.

Mr. J. F. Bennett, who reached Adelaide in March, 1839, says, that it still retained somewhat the appearance of a collection of booths, such as may be seen at a country fair. Brick and stone were then, however, beginning to take the place of straw and mud, and shingles and slates had partly supplanted canvass and reeds. The old hut gave way to the neat cottage or handsome two-story house. The first tenement erected in Adelaide, even when a few stakes or "pegs" were all that distinguished it from the surrounding forest, was a printing-office, from whence issued a newspaper, which contained the official acts and orders of the government, and the latest intelligence respecting the geography and capabilities of the new land. A wooden church, sent from England in frame, with sittings for 350 persons, was erected near Holdfast bay, at an early date; and on 26th January, 1838, the foundation stone of *Trinity Church* was laid, at Adelaide, by the governor, in the presence of a numerous assemblage of subscribers to its erection. On a leaden plate, was inscribed the names of the trustees and of the incumbent, with the following sentence from Nehemiah ii. 20:—"The Lord of heaven he will prosper us; therefore we his servants will arise and build." An extensive store, built of limestone, at a cost of £2,000, was erected by Messrs. Fisher, in the centre of the town; and in a remarkably short space of time Adelaide had assumed many of the characteristics of an established town. There were, says Mr. Morphett, "neatly and in some cases elegantly spread dinner tables, well-cooked dishes, champagne, hock, claret, and maraschino, the presence of some well-bred and well-dressed women, and the soothing strains of a piano." The illusion of sitting at the hospitable board of some luxurious London citizen was only dispelled by the visitor, on quitting the hall-door, tumbling against a cow, pig, or some such indication of colonial prosperity.

Adelaide received a severe check, in 1841-2-3, at the period of general de-

pression before mentioned; but it has since recovered, and made considerable progress; and it now ranks highly among the colonial towns in her Majesty's dominions, and eventually promises to become a noble city. The extensive scale on which it is laid out, and the ample provision thus made for the accommodation of a much larger population than it possesses at present, or is likely to possess even for many years, gives it rather a straggling appearance; but the fault, if it is one, is on the right side; and the plentiful circulation of fresh air thus secured must be very conducive to the health of the inhabitants.

Captain Sturt, writing, in 1849, of the southern portion of the city (which, it will be remembered, is divided by the Torrens into two portions, distinguished as North and South Adelaide), says it is twice the size of the northern, is more extensively built upon, is the established commercial division of the city, and contains the Government House and all the public buildings and offices. The shops and stores now built are of a substantial and ornamental character. The Government House stands in a well-kept enclosure of nearly ten acres, and has the appearance of an English country mansion. It is capable of enlargement. The public offices, built in a parallelogram, with an open space in the centre, are creditable to the colony; and the gaol, on which £36,000 have been improperly expended, is a large and substantial structure.

There are several Christian temples. *Trinity Church*, built of stone, stands on the north terrace, and forms a prominent object; *St. John's*, built of brick, is on the east terrace, from whence there is a commanding view of the Mount Lofty range. *Christ Church* is in North Adelaide. The Roman Catholic church, with its excellent public schools, stands in a fine situation on the west terrace; and there is a Roman Catholic cathedral, I believe, now building. There are several other churches and chapels, appropriated for the worship of the different Christian denominations. The Bank of South Australia is a prominent feature on the north terrace; and there are several other good buildings in various parts of the city. A theatre, capable of holding 1,200 persons, which was built a few years ago, and proved an unprofitable speculation, is now rented by government at £200 a year, and used for the supreme court, resident magistrates, sheriffs' offices, &c.

The streets have respectively a width of 66, 99, and 132 feet, intersect each other at right angles, and are sufficiently elevated above the bed of the Torrens to facilitate a perfect system of drainage, which is very much required; for, with the exception of Hindley and Rundle streets, the thoroughfares are unpaved, and large masses of rubbish are allowed to accumulate. Unless attention be paid to the drainage of Adelaide, a damp summer, followed by great heat, may cause a severe pestilential disease; for it is by the neglect of such precautions that, in climates like South Australia, plague finds not only a temporary but a permanent abiding place.

Hindley-street, about a mile in length, has many excellent warehouses and shops, with elegantly designed fronts and plate-glass windows. It is the principal place for business, and presents an animated appearance.

A large cemetery, sufficient for the requirements of Adelaide for many years to come, is situated outside the city line, on its western boundary.

Adelaide is abundantly supplied with water from the Torrens, and by means of wells sunk sixty to eighty feet. There are numerous springs in the hills, five miles distant, and at sufficient elevation to enable every house to be supplied by pipes.

Four bridges over the Torrens connect the two divisions of the city, which is surrounded by a public demesne, termed the "Park lands," for the breadth of half-a-mile. The advantage of these reserves cannot be doubted, although at present they increase the straggling appearance of the city, and must do so until Adelaide attains the importance anticipated for it by Colonel Light, to whose respected memory a monument, consisting of a pentagonal Gothic cross, forty-five feet in height, has been erected in the centre of Light-square, at Adelaide.

On both sides of the river between North and South Adelaide there are reserved allotments, to the extent of 200 acres, for the formation of pleasure-grounds and public gardens.

Beneath the umbrageous canopies which enhance the beauty of the city park, the annual horticultural and agricultural show of South Australia is held; and the occasion is a festive holiday for the city of Adelaide and the surrounding country. On this occasion, not only many varieties of

delicious fruits, beautiful flowers, and choice vegetables are exhibited, but also articles of export and of domestic economy, raised and prepared by the industry and skill of the colonists, together with models for agricultural implements, samples of corn, wax, honey, leather, starch, and other useful commodities.

Beyond the Park lands, which together with the city contain 400 acres, the "preliminary" or country sections, of 134 acres each, commence. Many of these have been laid out in smaller sections, and are being rapidly built on and improved.

The race-course of Adelaide is a peculiarly good one; and during the three days in the beginning of January annually devoted to this favourite amusement, the settlers from far and near throng to the city, racing being in this, as indeed in all the Australian colonies, a very popular pastime—as are also the other English sports of hunting, cricket, &c.

Level plains extend between the city and the *Port of Adelaide*, in 34° 51' S. lat., 138° 34' E. long., which is situated on the eastern bank of a large creek running nearly parallel with the coast for about twelve miles, and assuming, with its numerous branches, the appearance of a river. There are two entrances from seaward—the northern is shallow; the southern contains deep water, which is continued for ten miles. It is a very fair harbour, although originally it had only twelve feet at low water on the outer bar. By means of a dredging machine, the sand has been removed so as to allow vessels of 300 to 400 tons to pass into the haven; and from the nature of the submarine formation, the bar may be removed to a still greater extent, if necessary, and any improvement thus effected will be permanent. During the rainy season the Torrens pours some of its waters into the head of Adelaide creek. There is a light ship off the bar, at the entrance of the Port Adelaide creek, and a steam-tug now enables vessels to reach the shipping station without the vexatious delays to which they were formerly subjected. That portion of the population connected with the shipping or the harbour, reside on the spot, and give to Port Adelaide the appearance of a small town; but the only substantial buildings are the wharfs, one belonging to the government, the other to the South Australian Company, and the custom-house. There is a good macadamized road between the port

and city of Adelaide (distant about seven miles), constructed at an expense of £12,000 by the South Australian Company, and subsequently transferred to the local government, in exchange for 12,000 acres of land. But a rail or tram-road is still much needed—not only from the port to the city, but also to Gawler town—for the conveyance of ore and wool to the place of embarkation; this useful measure will, it is expected, be soon accomplished.

Another excellent road, the foundation of which is of stone brought from Kangaroo island, has been constructed across a mangrove swamp, between the port and *Albert Town*, a straggling village about a mile distant; the cost of this road, from the expensive period at which it was commenced, is stated at £14,000, which is improbable.*

Besides that connecting it with the port, four other roads branch off from Adelaide, of which one leads north through Gawler town—another, called the *Great Eastern Road*, to Mount Barker and the Murray; the third, running southwards, crosses the range to Encounter bay; and the fourth, to Glenelg and Holdfast bay.

There are several pretty villages in the vicinity of Adelaide; indeed, within five years of its establishment, upwards of “thirty villages were started” within three miles of the city; in 1841, there were but seven remaining, viz., *Hindmarsh*, containing 200 houses; *Bowden*, 50; *Prospect*, 25; *Thebarton*, 100; *Kensington*, 40; *Walkerville*, 50; *Islington*, 45. *Hindmarsh*, *Bowden*, and *Prospect*, were principally inhabited by persons engaged in the carriage of goods from Port Adelaide to the city, and by brickmakers and labourers. *Thebarton* and *Walkerville* contain many substantial houses. *Kensington* and *Richmond* are quiet and secluded villages embosomed in trees, with neat residences, and beautiful gardens. *Islington*, on the high-road to Gawler, is a favourite place for dairymen, on account of the good cattle runs immediately behind the village, which contains several good inns.

About three miles from Adelaide, on the right bank of the Torrens, is the village of *Klemzig*, the oldest of the German settlements; the houses having been built by the refugees on the plan of those of their native country, contrast pleasingly with the general style. The scenery in the valley of the Torrens is described as picturesque, its

grassy flats being shaded by beautiful and umbrageous trees, and the land in the vicinity of the sources and tributaries of the Torrens is very valuable. The river itself, although in summer frequently but a chain of deep broad pools, with long intervening dry spaces, in the winter pours down an impetuous stream, furnished by the mountain torrents, whose channels lie in the deep glens or ravines that occur between the spurs of the Mount Lofty range. The scenery around the heads of these little streams is described by Mr. Angas as wild and romantic, especially that of *Glen Stuart*, a rocky pass between the hills; during its course through which the *Moriatta* rivulet dashes over steep chasms of rock, with precipices rising like walls on either side, forming three distinct waterfalls. In one of these the water has a descent of some seventy feet, falling into a deep pool, from which it again emerges on its downward mission to the plains.

The borders of this stream are in many places choked with the fresh-water tea-tree; the native lilac, and a dwarf species of mimosa are frequent along its banks. The variety of *Xanthoræ* or grass-tree, styled *Black Boy* by the settlers, overruns the rocky sides of the hills, usually abounding in the most stony and inaccessible places.

The marine townships of *Glenelg* and *Brighton* have a good beach, and are frequented as bathing-places by the inhabitants of Adelaide: a charming ride of four or five miles, along an excellent road, brings the citizen to the bay, which is a favourite evening's excursion after the heat of the day is over.

The little river *Sturt* falls into the gulf at *Glenelg*, after spreading over the flats behind the sandhills at that place. On its banks, as also on those of the *Onkaparinga*, a more important stream about fifteen miles to the southward, there are excellent farms. The township of *Noarlunga* is well situated about two miles from the head of the *Onkaparinga*, which is navigable so far for small craft. A large steam flour-mill, and a bridge of 100 feet span, have been erected; several lodes of copper ore exist in this vicinity. Beyond *Noarlunga* is the township of *Wilunga*; the country between is generally good, portions of it are sandy and scrubby, but *Morphett's Vale* is a rich and extensive piece of land, from which *Sturt* mentions having seen several large stacks of hay cut, before it was settled, and while yet in a

* Angas' *Savage Life*, p. 207.

state of nature. Willunga lies close under the foot of the hills, which here trending to the south-south-west, meet the coast line extremity of the Southern Aldingha plains. Close to this point is the conical hill named *Mount Terrible*. The Mount Lofty range which forms the eastern boundary of the extensive plains on which Adelaide stands is about three miles distant; the intermediate space traversed by the Great Eastern or Mount Barker road, is laid out in carefully cultivated farms. On the first rise is the Glen Osmond lead mine, from thence the road winds up a romantic valley to the summit of the range, which is covered with a dense forest of stringy bark, and adorned with a great variety of papilionaceous plants; and several beautiful kinds of orchidaceæ. On the eastern confines of Adelaide county is the village of *Hahndorf*, with its industrious Prussians, situated among the Mount Barker hills, and the village of *Nairne*, immediately to the north of which is Mount Torrens.

To the north and east of the city of Adelaide are extensive tracts of fertile land, intersected by the valleys of the North and South Para rivers, beyond which lie the rich districts of Lynedoch valley, of which however but a small portion is comprised within the county whose leading features we have now noted.

The names and limits of the four counties north and north-east of Adelaide, are as follows:—

Gawler County, bounded on the south by Adelaide county as far as the extreme east of the Gawler special survey (all of which it includes); thence by a line following round this survey to the main north road, and running along this road to the crossing of the Wakefield river, bounded on the north by this river, and on the west by the coast.

Light County, bounded on the west by the Gawler county, and on the south by Adelaide county, as far as the dividing ridge between the Gawler and the Rhine; thence by a line following the main range to the north, past Mount Rufus, to above the sources of the Light, in the parallel of about $33^{\circ} 50'$; turning round the ridge on the west bank of the Gilbert, in a line nearly direct upon Mount Horrocks, until it meets the eastern sources of the Wakefield, and running along this river to the crossing of the northern road.

Stanley County, bounded on the south by the counties of Gawler and Light, on the east by the main range as far as the parallel of

$33^{\circ} 20'$, and then by the down course of the Broughton river, till about due north of the mouth of the Wakefield, a line connecting these points forming the western boundary.

Eyre County, bounded on the south by Sturt county; on the east by the Murray, (including the sections laid out on each bank), as far as the Great Bend; from thence by a direct line to the north-east angle of Light county, which forms the western boundary.

Of the territory comprised in these four counties, the central and southerly portion is the most settled. The chief place—*Gawler Town*, situated in the angle formed by the junction of the little Para and Gawler rivers, though yet in its infancy, promises to become of considerable importance; it contains a church, three or four good inns, a steam flour mill, several stores, and other buildings. The copper ores from the Burra-Burra mines pass through this town for shipment at Port Adelaide, which is about twenty-three miles distant. Gawler river rises in the southern part of the Barossa ranges, and after receiving the Little Para, flows to the westward of the shores of St. Vincent's gulf. It has extensive and well-wooded flats of deep alluvial soil along its banks, flanked by the plains of Adelaide, the line of trees running across them, only with a broader belt of wood, indicate the course of the river in a similar manner to that of Adelaide creek. "Except these features," says Captain Sturt, "and two or three box forests, at no great distance from Albert town, the plains are almost destitute of timber, and being very level, give an idea of extent they do not really possess, being succeeded by pine-forests and low scrub to the north from Gawler town."

Beyond Gawler town, both to the north and east, a decided change becomes perceptible in the character of the country; the monotonous plains give place to an undulating and highly wooded district, containing many fertile valleys. The road between Gawler town and the river Murray, at about eight miles from the former, passes through *Lynedoch Valley*, an extensive and fertile tract, where there are two copper mines and a pretty hamlet. There is very little surface water; but a copious supply, of excellent quality, has been found attainable by digging five or six feet down in the centre of the valley. Lynedoch valley is bounded on the east by the *Barossa range*, as the beautiful country is termed, situated between

the river Light and the hills, called the Heranian range; those termed the Hawdon range and the Belvedere range, comprising an area of about 225 English square miles. This district is rich in metals, deposited close to the surface, and occasionally cropping out. It is watered partly by the Gawler and partly by the little river Rhine. One of its most picturesque and valuable tracts is Angas Park, the property of Mr. G. F. Angas, which is about seven miles long and four broad, with a deep siliceous soil, blackened by the abundance of vegetable matter. *Salem Valley* is a lovely spot: the flat of the valley, through which the Gawler flows, is from one to five miles broad, with undulating hills rising on either side. The thriving village of *Bethany*, inhabited by several hundred Germans, is situated at the foot of the Barossa range, as are also those of *Lobethal* and *Langmeil*; but the chief place in the district is *Angaston*, at *German Pass*, which is picturesquely situated at the head of a ravine, looking towards the Greenock hills, and possesses a considerable number of comfortable habitations, a good hotel, schools, and stores. Outside the town is an excellent place of worship, with a cemetery, enclosed by stone walls.

About twelve miles to the north-west of Angaston, close to the river Light, is the rich copper mine of Kapunda, the property of Captain Bagot and Mr. Dutton, from which the valuable muriate of copper, or acatamite, previously found only in South America, is procured. The cottages of the miners are built of stone, obtained from a hill of clay slate on the property, which, being more or less tinged with copper, gives them a peculiar appearance. A chapel, serving also as a school-house, has been erected, and the little hamlet wears a cheerful aspect. Before long, a township will probably be formed here. The river Light deserves remark, not only for the mineral wealth in its vicinity, but also for the thousands of acres of fertile soil ready for the plough, diversified by undulating hills, with here and there patches of open soil. The fertility of the numerous branch valleys which strike off from the main channel of the Light, on each side, is testified by Mr. Dutton from personal acquaintance, he having resided, for some time, at Anlaby, under Mount Waterloo.

On the Light river, and from thence northwards, the cultivation of the soil is not carried on, excepting by those settlers who

grow corn for their own consumption; here, also, "the bush" may be said to commence, as all the country to the north, taking in the Wakefield, Hill, Broughton, and Hutt rivers, Crystal brook, &c., as far north as Mount Arden, is occupied by sheep and cattle farmers. In these districts there is no lack of the best soil, and in most of them, land already surveyed is open for selection to the newly arrived emigrant.* A remarkable feature in the extensive downs through portions of which the Wakefield flows, is the absence of trees; they are, nevertheless, well grassed, and covered with a profusion of orchideous plants. The Broughton river, which, as we have before seen, forms the northern boundary of Stanley county, and, consequently, of the territory of which we have been speaking, was crossed by Eyre in 33° 28' S. lat. At that point its bed is of considerable width, and its channel occupied by long, wide, and very deep water holes, connected with one another by a strongly running stream, which seldom or never fails, even in the driest season. The soil upon its banks, however, is described as not valuable, being generally stony and barren, bearing a sort of prickly grass (*spinifex*). Wild-fowl abound in its pools.

In the eastern portion of Stanley county is the famous Burra-Burra mine, situated on the Burra creek, about eighty-five miles in a direct line from Adelaide. The ores lie in the same direction as the ranges in which they are placed. Captain Sturt makes the following mention of this immense mine:—"The deposits of iron are greater than those of copper, and it is impossible to describe the appearance of the huge clean masses of which they are composed. They look, indeed, like immense blocks that had only just passed from the forge. The deposits at the Burra-Burra amounted, I believe, to some thousand tons, and led to the impression, that where so great a quantity of surface ore existed, but little would be found beneath. In working this gigantic mine, however, it has proved otherwise. I was informed by one of the shareholders, that it took three hours and three-quarters to go through the shafts and galleries of the mine. Some of the latter are cut through solid blocks of ore, which glitter like gold where the hammer or chisel has struck the rock, as you pass with a candle among them." Statistical information respecting

* *South Australia and its Mines*, by Francis Dutton. 1846.

this extraordinary mine is given elsewhere.

The greater part of Eyre county is occupied by "the dark and gloomy sea of scrub" previously adverted to as the Murray Belt, here about twenty miles wide; the hilly country immediately to the westward of it, is of an inferior description, portions only being occupied as sheep stations. A dray-road has been formed through the scrub, communicating with the government station of Moorundi, distant twenty-six miles from the Great Bend of the Murray, and ninety from Adelaide. It was established by Governor Grey, in 1841, in consequence of the collisions, too frequently attended with loss of life and great destruction of property, which were constantly occurring between the settlers coming overland with stock from New South Wales, and the natives. So deep a spirit of revenge had thereby become kindled in the breasts of the latter, that although suffering severely from every contest, they would not allow any party with stock to pass along the line of the river, without attempting to stop their progress. The appointment of Mr. Eyre as resident magistrate and protector of the aborigines, was most judicious, from his proved humanity, and the influence he had acquired over the natives. By his exertions, aided by the occasional distribution of a limited supply of blankets and flour among the aborigines, their good-will has been obtained, and the banks of the Murray, no longer the scene of conflict and slaughter, are now occupied by stock stations; while in calm weather, the natives, in their canoes of bark, are constantly upon its waters, busily employed in striking fish.

Mr. Eyre, now lieutenant-governor of New Zealand, has been succeeded at Moorundi by Mr. Scott, whose influence appears to equal that of his predecessor.

To the south of the county of Eyre lie the counties of Sturt, Hindmarsh, and Russell.

Sturt County, bounded on the south and east by the Russell county, as high as its termination in about $34^{\circ} 50'$ S. lat., and thence by the Murray (including the thirty-nine sections), to the parallel of about $34^{\circ} 32'$ due east of the dividing ridge between the Gawler and the Rhine, a line between which points forms its northern limits; on the west by the counties of Adelaide and Hindmarsh.

Hindmarsh County, bounded by the coast-line from the termination of the main range

in St. Vincent's gulf below Mount Terrible, round Cape Jervis, to the sea outlet of the Murray; thence by the south-east shore of Mundo Island, in Lake Victoria, to Point Sturt, on the northern shore of the lake; thence by a direct line across the lake to the mouth of the Bremer; thence by that river up to the crossing-place of the eastern road, above Langhorne's station; thence, taking a line about $N. 20^{\circ} W.$, till it strikes the main range at Mount Barker, continuing along the eastern range (enclosing the Mount Barker survey), to Mount Magificent; thence by a course about north-west, to the top of the Willunga range, where it is crossed by the southern road, and following the ridge to the sea below Mount Terrible.

Russell County, bounded by the coast-line from the sea outlet of the Murray, to a spot opposite where the Salt creek empties itself into the Coorong; by this creek, to the rocky ridge at its source, and thence by taking a line due north, till it cuts the Murray, in about $34^{\circ} 50'$ S. lat., bounded on the north and west by the Murray, as far as Pomunda; thence by a straight line across Lake Victoria to Point Sturt.

Of the territory included in these three southern counties, the finest and most cultivated portion is comprised in the district which, taking its name from its distinguishing feature, is called *Mount Barker*. This mountain, with its saddle-backed summit, is a very conspicuous object, visible for many leagues in the interior, beyond the Murray; it forms a landmark for overland parties from New South Wales, by which they steer for the settled districts of South Australia. The district may be said to extend from the village of Nairne (before mentioned) to Strathalbyn, on the river Angas, the latter place being fifteen miles from the shores of Lake Victoria. It abounds in beautiful valleys which, though of limited extent, are level and clear; their soil is a rich alluvial deposit, and the plough may be driven from one end to the other, without meeting a single obstacle to stop its progress. The trees are grouped as if by the hand of art. All British grains and fruits are climatized here — and apples, strawberries, and other fruits, which do not thrive well upon the plains, grow luxuriantly at Mount Barker, while upon the sunny low lands, all the fruits of the Mediterranean are produced in abundance. Besides much fine agricultural land, there is also

a considerable portion of good pasturage; but there are, nevertheless, many stony ranges entirely useless, even to stock.*

Mount Barker, the county-town of the district, contains a court-house, where a bench of magistrates sit once a week; a police-station, a post-office, a school-house, steam flour-mill, an inn, and some respectable private dwelling-places. The German village of *Hahndorf*, before named as situated on the confines of Adelaide county, belongs to this district, as does also the township of *Macclesfield*, situated on the river Angas. This stream has its source in some clear bubbling springs near the township, that gush up from the earth, shaded by mimosa trees, supplying a constantly running brook of the purest water. *Macclesfield* is, at present, a pretty little village; the white cottages and tents of its settlers, intermingled with corn-fields and gardens, and groups of cattle reposing under the shade of the gum-trees, bespeaking the nucleus of the future town.† Its native name is *Kangooarinilla*, signifying "the place for kangaroos and water."

To the east of the Mount Barker district a flat country, with a poor and sandy soil, extends to the Murray belt, beyond which, on the direct road to Mount Gambier and Rivoli bay, and fifteen miles below *Moorundi*, is the site of the township of *Wellington*, as yet only a station for the mounted police. A ferry has been established here across the Murray, which enters Lake Alexandrina, about half-a-dozen miles from this point.

"The country immediately to the eastward of the Murray affords, in some places, a scanty supply of grass for sheep; but, generally speaking, it is similar in its soil and rock formation, and consequently, in its productions, to the scrubby country to the westward."‡

Many parts of the shores of Lake Victoria are composed of rich land, but in others they are very bleak and desolate. The ground on the eastern side of the lake is a sand flat, gradually improving to the southward; where the shore begins to trend to the westward, it becomes very good. The rising ground behind, though sandy, affords excellent back-runs for cattle, and the hills are well timbered. Along the eastern and southern shores of Lake Albert,

the same character of country continues, but the soil appears to be still better, and the flats become more extensive. Mr. Frome states, in his report, that he considers that there are, at least, 50,000 acres of good agricultural soil on the borders of the latter lake.

The *District of Encounter Bay* lies between the abrupt cape called Rosetta head and the sea-mouth of the Murray. It consists of several beautiful valleys, covered with luxuriant grass, and backed by the ranges of hills which, opposite Encounter bay, occupy nearly the centre of the promontory, forming a division between the eastern and western waters, which is marked by a considerable breadth of stringy bark forest. The settlers here are numerous, and the whale-fishery is carried on with considerable success.

Currency Creek and *Finniss River* empty themselves into the Goolwa, as the lagoon is called connected with Lake Victoria, to the eastward; the valley of the former stream is prettily wooded and grassy, but contains no very great extent of good land. To the north and south it is bounded by barren scrub. Near the head of the creek is a great sandy basin, which forms a striking contrast to the fertile valleys in its vicinity, and is, in itself, a remarkable physical feature. At an elevation of between 600 and 700 feet, this basin is surrounded by rugged stony hills, excepting to the south and the south-east, in which directions it falls into the valley of the Hindmarsh and *Currency creek*, respectively. *Mount Magnificent*, *Mount Compass*, and *Mount Jagged*, rise in isolated groups in different parts of this basin, the soil of which is pure sand; the surface undulating, and in many parts covered with stunted banksias. The *Finniss* rises behind *Mount Magnificent*, and is joined by a smaller branch from *Mount Compass*, as it flows from the eastward.

To the north-east of Hindmarsh river, lies the narrow but beautiful valley of the *Myponga*, between which and *Mount Terrible*, the country is poor and scrubby. *Aldinga Plains* (to the north of the *Myponga*,) are sufficiently extensive to feed numerous sheep; but are at present unused, from their deficiency of surface water. The little river *Yankalilla* empties itself into Gulf St. Vincent, passing between hills of white sand, overgrown with an almost endless variety of dark evergreen shrubs and

* Captain Sturt's *Account of South Australia*.

† Angas' *Savage Life in Australia*.

‡ Captain Sturt.

salsolaceous plants; like the valley of the Myponga, that of the Yankalilla ranks among the most fair and fertile tracts in the colony; the country between them is exceedingly romantic, becoming more broken and mountainous towards Rapid bay, a short distance from whence is the valuable lead mine of Yattagolingay.

Before leaving this portion of South Australia, it may be noticed, that from Cape Jervis, its south-east extremity, a practicable route for wheeled vehicles has been repeatedly traced to a good and available country twenty miles beyond *Mount Remarkable*, in the north, equal in lineal distance to the space of country between the eastern boundary of Cornwall and the eastern boundary of Middlesex, and containing, it is believed, as large a proportion of available land in a given breadth, as was comprised in that division of England while yet in a state of nature.

Partially located and unsettled Districts.—The extremity of the Eyria peninsula, situated between Spencer's gulf and the Great Australian bight, comprises,

Flinders County, which is bounded on the south by the coast between Capes Wiles and Cape Catastrophe; on the east, by the coast from Cape Catastrophe to the northern extremity of Louth bay, including all the islands on the coast between these parallels, as well as William's and the Gambier island; the northern and western limits are still undetermined.

The settlement at Port Lincoln is the only one, not merely in Flinders county, but in the whole province westward of Spencer's gulf. The character of the neighbouring country, and the future prospects of the township, have been differently viewed by several explorers; some contending that the territory around is worthless, others that there are large fertile tracts. Unless, however, a district be thinly wooded, and explorable by navigable rivers, it is almost impossible to form an accurate opinion.

According to Lieutenant-colonel Gawler, whose geographical and geological observations are extremely valuable, the surface of the Eyria peninsula, which is nearly an equilateral triangle of 200 miles on each side, is divided into three great portions:—

(1) the *mountainous table-land tract*; (2) the *low undulating country*; and (3) the *hill country*. The first has been noted at p. 660. The many short and narrow mountain ridges, which rise from 300 to 700 feet above the

plateau, in much confusion, but with the prevailing direction towards Spencer's gulf, are generally grassy and sprinkled with small casuarina trees; the water-courses between these ridges are occasionally lined with casuarina, and with pines twenty-five to thirty feet in height; the great outer slopes of the table-land are also frequently grassy; but the small plains between the bases of the ridges and the water-courses are almost always covered with brush, scrub, or heath, generally the latter.

The herbage is of the description known as kangaroo grass, but more commonly of the same slender sort as is seen on the plains between Adelaide and the sea. The soil which bears the grass is a red ferruginous sandy loam, much of it appearing rich of its kind, and available for agricultural or horticultural purposes.

The *low undulating country* forming the tongue of the peninsula consists of gentle elevations, not more than 300 feet above the sea, and is said to be a poor region. A scarcely varying and nearly flat belt of brush, scrub, and heath, seven to fifteen miles wide, extends along the sea-coast to the base of the mountain table-land, whose drainage passes through this tract. Several salt lagoons, frequently dry and clothed with fine groves of the "salt-water tea tree," are found in this district.

The *Hill Country*, elevated 600 to 1,000 feet in height, commences in about $34^{\circ} 10'$ S. lat., and has its common courses to north-east and south-west, with strong deviations to north-west and south-east. In the northerly subdivision of these ridges, i.e., from the "Sheep hills," in $34^{\circ} 11'$ to "Northside hill," a direct distance of forty miles, the country is extensively covered with good grass; towards Cape Catastrophe, a similar country, though in a more limited proportion, extends. The Hill country contains many fine valleys, one named the *Tod* is sixteen miles in length, and has numerous lateral branches. Another, six or eight miles to the west of Boston bay, is a succession of broad swamps, some of which are now available for agriculture, as the soil in these valleys is of excellent quality. In the hill ranges there is a considerable quantity of permanent surface-water, the grassy hills and valleys are sprinkled with fine casuarinas, and the scenery is very beautiful.

Captain Hawson ascended the Hill country from the *Happy Valley* in a northerly direction for fifteen miles to the confluence of the

Tod and *Severn* rivers, about five miles west-north-west of Mount Gawler (twenty-one miles distant from Boston bay.) During the whole of this journey, he passed over a very fine sheep country, the hills being covered to their summits with grass. The explorer reached *Cowan's Vale* and lake, (part of *Steven's* river,) about twenty miles north-north-west of the Happy valley. "Nothing," he says, "can be imagined more beautiful than the country about this vale (which is about five miles long by one broad); the grass in the flats being abundant, and growing to a great height." *Smith's Valley*, eight miles distant in the same direction, is equally rich, and contains many thousand acres of excellent land fit for agricultural purposes. The hills in every direction are adapted for pasturage, and abundantly supplied with water the whole year round. During this journey of fifty miles the travellers were never two hours without water, and did not meet with five miles of unavailable land. When at the greatest distance from the Happy valley the country, as far as the eye could reach, appeared to be of a similar character. The opinion of Mr. Robert Tod, of the country to the north and west of Port Lincoln, is equally favourable; he says the majority of the hills, even during the dry season, afford good sheep pasture, while the valleys appear to be adapted for agricultural purposes.

Major O'Halloran and a party of police made two excursions, one of eighty-five miles to the north-east, and the other of fifty-five miles to the north-west of Port Lincoln. He reported the country to be well watered, covered with luxuriant herbage, abounding in game, and with numerous natives. Angas, writing in 1846, says that about thirty miles to the north and west of Port Lincoln, there is a rich and beautiful country, as yet but little known, having several fine lakes of water, and luxuriant pasture land, scattered with park-like trees; beyond these lakes rise two distinct ranges of lofty and abrupt hills. Waungerri is the native name for the largest lake, which abounds in black swans and other water-fowl; kangaroos, emus, and a variety of smaller game are still numerous in the surrounding country, which is unoccupied by settlers.

These opinions of disinterested eye-witnesses fully redeem Flinders county and the Port Lincoln neighbourhood from the

imputation of barrenness; there are now from 70,000 to 100,000 sheep in this district, and a practicable line of route having been discovered from Adelaide along the western shore of Spencer's gulf, the value of landed property will most probably increase; the more so, if, as reported, good copper ore be also found in this part of the colony, which has already commenced shipping wool and tallow direct from Boston bay to England.

Mr. Eyre crossed the country in a direction nearly due east from Streaky bay towards Mount Arden, September 18, 1839. The first part consisted of alternations of brush, of open grassy plains, and high scrubby and sand ridges, interspersed with hard limestone flats, to the base of the Gawler range (see page 660), whence the route was through a perfect desert, very scrubby and stony, with much prickly grass growing upon the sand ridges. The hills seen were without either timber or shrubs, and very barren, with their front slopes exceedingly steep, and covered by small loose stones; several salt lakes were seen in various directions, but no indications of fresh-water or springs. Ridge behind ridge appeared to rise to the north-west, increasing in elevation. Further east the view from a hill showed to the north one vast sea of level scrub, and in the midst of it a lake. The journey to the head of Spencer's gulf was performed with much difficulty; Eyre says, "there were no water-courses, and no timber—all is barren, rocky, and naked in the extreme." It appears to me probable that the Gawler range extends continuously to the north-west, and that a good country may be found on the northern sides of the range at a distance of fifty to 100 miles inland from the Great Bight, improving as it approaches the districts of Western Australia.

Yorke Peninsula has only been partially examined; so far as is known, the shore is generally low, with several sandy beaches, on which may be seen ironstone, granite, whinstone, and quartz. The land, as seen near Point Pearce, rises gradually from the coast towards the centre of the peninsula, and consists of open plain, with occasional belts of forest. This description of country appears to exist as far as the eye can see, north or south. The soil is light, of a loamy nature, and well covered with fine grasses. Fresh water has been discovered in several places. The scrub and pine brush

are in belts, but not dense.* The water shed appears to be westerly. It is premature to decide as to the pastoral or agricultural capabilities of the peninsula, or as to its mineral resources. The geographical position is good; with navigable gulfs and harbours on either side, and possessing a temperate climate, it will doubtless attract attention as the population and wealth of the province increase.

The country to the eastward of the head of Spencer's gulf, and north of Stanley county, has not been well explored: the district about Mount Remarkable is said to be exceedingly picturesque and good, and possessed of considerable mineral advantages. A special survey of 20,000 acres has been taken by a company, for the express purpose of working any lodes that might be found. After passing the Mount Remarkable range, the aspect of the land deteriorates, and continues falling off towards the dreary region which extends round the head of the gulf, and towards Lake Torrens.

With regard to the country eastward of the high land, extending north from Mount Bryan, as far as Mount Hopeless, a distance of 300 miles, as far as the meridian of 141°, and probably beyond it, the result of several investigations shows, that there is no land available for either agricultural or pastoral purposes; and in the unbiassed opinion of Captain Frome, of the Royal Engineers, though there may be occasional spots of good land at the base of the main range, on the sources of the numerous creeks flowing from thence towards the inland desert, these must be too limited in extent to be of any present value.

Two recently-formed, but important counties, yet remain to be noticed, situated in the south-eastern portion of the colony, viz. :—

Robe County, bounded on the north by the parallel of 36° 54' S. lat., extending from the sea-coast to where it intersects the 141st meridian; on the east by the said meridian; on the south by the northern boundary of Grey county; and on the south-west and west by the sea-coast.

Grey County, bounded on the east by the meridian of 141° from the sea-coast, to where it is intersected by the parallel of 37° 20' south; on the north by the said parallel, from its intersection with the 141st meridian, to the sea-coast; on the south-west and south by the sea-coast. In Robe

county a township has been laid out on Guichen bay, and one in Grey county, on Rivoli bay. Governor Grey, accompanied by Mr. Deputy-surveyor Burr, explored the territory now comprised in these counties in 1844. From the statement of these gentlemen we learn, that an almost uninterrupted tract of good country stretches between the rivers Murray and Glenelg, which, in some places, thins off to a narrow belt; in others, widens out to a very considerable extent; and towards the boundaries of Victoria province forms one of the most extensive and continuous tracts of good country which is known to exist within the limits of South Australia. The general features of this line of country may be briefly stated. From the neck of the peninsula which separates the Coorong from Lake Albert, to the Salt creek, or Bonney's creek, there is a belt of grassy casuarina hills, with numerous plains of good soil, in which water may be obtained within a few feet of the surface. This belt is bordered on the north-east by desert country, on the south-west by the Coorong. From Bonney's creek to the crossing of the Coorong, a distance of about thirty-five miles, the road passes generally amongst a succession of salt swamps and low scrubby hills. About two miles north of this road, and following a direction nearly parallel to it, is the low range, named Wambat range, behind which there is an extensive fresh-water swamp, several miles across, which appears to be subject to annual inundations. The soil on this swamp is similar to that on the flats of the Murray; in it are many grassy hills, which have the appearance of islands. Beyond the swamp, to the north and north-east, there are a succession of ranges which do not, from a distance, look very promising. From the crossing of the Coorong to Cape Bernouilli the country improves; from Cape Bernouilli to Guichen Bay, and for some distance around Mount Benson, and to Lake Hawdon, there is a useful tract of country. There are several ridges of high land, separated by low level ground, a great portion of which is subject to inundation; but the soil is excellent; and some of these plains have been sufficiently raised by volcanic action, to render them dry and available for pasturage or agriculture. Around Rivoli bay there is much good land and picturesque scenery; from thence to Mounts Schanck and Gambier (see p. 661), the country is, for the most part, of the richest description,

* Report of Mr. Hughes.

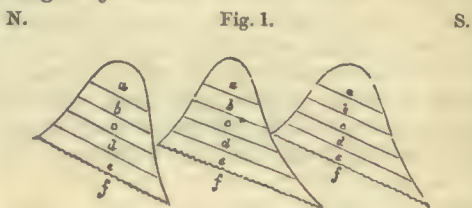
the soil of a dark brown loam. The trees grow luxuriantly; the blackwood attains an extraordinary size; beside which, there are several trees quite different from those of Adelaide. The Tatiara country, once so celebrated for the ferocity and cannibalism of its inhabitants, is now occupied by settlers, who have of late crossed the Murray, in considerable numbers, to form stations there. Between the land bordering the left bank of the Murray, and that contiguous to the sea-coast, there remains a considerable extent still to be explored, before any decided opinion can be formed as to its character.

The following are the sailing distances, in nautical miles, from Adelaide:—England, 11,500; Cape of Good Hope, 6,000; Ceylon, 4,500; Mauritius, 4,400; Timor, 2,700; Java, 2,650; Melbourne (Port Phillip), 450; Sydney (New South Wales), 1,134; Freemantle (Western Australia), 1,400 miles.

GEOLOGY.—There has evidently been, in this portion of Australia, a subterranean movement of great power, which, finding no vent in the northern district, in the vicinity of Mount Arden, pursued a southerly course, where it met less resistance, and by successive upheavings tore up the superincumbent strata, and raised to a considerable elevation a belt or zone of rocks, flanked by similar and parallel ridges. The dip of the strata composing the mountain range of South Australia, from 32° to 36° S. lat., so far as has been observed, is generally to the southward; the exception to this declination is probably attributable to the existence of rocks of igneous origin, such as granite, sienite, greenstone, &c. The rocks, of which the main range is composed, belong to the oldest of the primary strata; they are, so far as known, totally devoid of any evidence of the existence of animal or vegetable life during their formation; but the rocks on the plains teem with fossil remains, many of which belong to species identical with, or nearly allied to, the species now existing in the adjacent seas. The primary or sedimentary rocks of the mountain range have manifestly been forced out of an horizontal position by subterranean action; but the strata composing the plains which rest upon the sedimentary rocks are perfectly horizontal, and have, therefore, evidently not been subjected to the influence of the upheaving power.

Near Mount Arden, the indications of volcanic agency are more manifest than at the portions of this range farther south;

and in the same latitude as Mount Arden, to the eastward, Captain Frome, of the royal engineers, noticed basaltic rocks, thermal springs, and what appeared to be the crater of an extinct volcano. It appears to me that the axis of perturbation was to the south-east, and that the pent-up gases found, or rather forced, an exit in numerous small volcanoes, of which the craters are still to be seen in the province of Victoria, on the line of country extending from Lake Hindmarsh to the basin of Port Phillip. The manner in which the Adelaide range was raised from the bed of the ocean, is explained by the following diagrams, prepared by Mr. Burr, who has given much attention to this interesting subject:—



"This section exhibits a regular succession of strata of the same mineralogical character, and lying in the same order. The arrangement might be conceived to arise from a uniform and powerful subterranean action on strata, which had formerly been horizontal, and placed above one another in the following order:—

N	Fig. 2.	S.
	a	
	b	
	c	
	d	
	e	
	f	

Where *a*, *b*, *c*, *d*, and *e*, represent strata of sedimentary rocks, which were originally deposited on the unstratified rocks, *f*. For it is evident, that in order to produce the effect exhibited in Figure 1, we have only to propel a force, having a tendency to rise upwards, from the north to the south, when the horizontal strata in figure 2 would be thrown into a position similar to that exhibited in figure 1, which represents, in a general manner, the arrangement of the strata composing the principal range of South Australia. In this figure, *a* represents a quartzose sandstone traversed by veins of quartz, frequently accompanied with ironstone; *b*, a coarse dark-coloured slate, with veins of quartz, and occasionally of laminated specular iron; *c*, limestone beds, frequently very impure, and passing into slate and slaty sandstone. In this there are frequently veins of calcareous and other spars, with quartz, and ores of the metals, iron, copper, lead, &c., &c.; *d*, mica slate, chlorite slate, hornblende slate, passing upwards into sandy slates, and thence frequently into sandstone. This strata is also metalliferous, and contains veins

of hornstone, in which are calcedony, opal, agate, cornelian, and jasper of varieties, especially near its junction with the strata immediately above it; *e. g.* gneiss, which is metalliferous, and frequently contains garnets; *f.* granite, and other igneous rocks."

The thickness of the strata varies much in different places, but the exact extent has not yet been ascertained. The arrangement above given is subject to variations arising from local causes. In all probability the east and west faces of the Adelaide range were covered by the ocean, long after the force which raised the mountains had ceased to operate in that direction. Mr. Burr is of opinion that the successive deposits accumulated at the foot of the range were, at no distant geological period, raised, from being the bed of the ocean, to the position of dry land, by an intense and deeply-seated upheaving force, which, by degrees, and in an uniform manner, raised the fossiliferous strata to their present level; and that this force was exerted in a direction from west to east, as explained in the following diagram:—



In support of this opinion, of a positive, or at least comparative period of repose, it is noticed that the embouchures of the ravines, close under the range, have all the appearance of having once formed a sea beach. Mr. Burr adds, that "the fossiliferous strata are composed of a succession of horizontal layers of limestone, of greater or less purity, but generally containing a large proportion of sand, especially the lower beds which have been exposed to view, some of which are indurated sandstone, good for building, containing, when compared with the upper beds, but few fossil remains. These rocks are nearly white, or of a cream colour. The fossiliferous strata, which are considered to belong to the tertiary period, are generally covered with a deposit of soil and limestone, that does not contain any visible organic remains. This may have arisen from a gradual shallowing of the water by the rising of the land; for the tides and current in shallow water, would be more destructive to the remains of animals, than if they were deposited in mud in water of a greater depth. The surface soil, consequently, is such as might be supposed to arise by the

drying of an impalpable mud, formed of attrited shells and other matter, which had been subjected to the action of the tides in shoal water. The strata composing the tertiary formation contain beds of the sulphate of lime (gypsum), the nitrate of potassa, and bitumen."

The gypsum found is rather a sandstone, containing a sulphate of lime, formed by shells and other calcareous matter, which, from its affinity for the sulphuric acid contained in sea-water, and disengaged perhaps by extreme heat, or other agency, united to the lime, and left the silica nearly pure. Mr. Burr accounts for the nitrate of potassa, which is found in an efflorescent state on the surface of the rocks, by supposing that the potassa contained in the rocks united with the nitrogen of the atmosphere in hot and dry weather; and the bitumen from the decomposition of water by animal and vegetable matter.

The vast fossil bed which extends from about the meridian of 139°, with an imperfectly-known width, towards the western boundary of the province, and from the sea-mouth of the Murray to 32° 40' S. lat., indicates that a large extent of South Australia was, not long since, submerged. The strata are horizontal, surface level or slightly undulated, and the greatest elevation about 400 feet above the level of the sea. The upper stratum consists of beds of common oysters and oyster-shells, unbroken, three to four feet in thickness. Below this stratum there are deeper beds, of mixed coral, echini, pectoris, spiralis, and other small marine shells, generally much broken, and deposited in sand, limestone, and selenite, alternating with beds of sand without shells. At the base of these, or beneath them, are vestiges of fish, teeth, and nautili, four or five inches in diameter. Beds of excellent compact limestone occur sometimes in the fossil formation.

During the process of sinking wells at Adelaide, beds of oyster-shells, very perfect, were found forty feet below the surface; that is, seventy to ninety feet above the present ocean level.

Mr. Menge is of opinion that the terrace which occupies an undulated plain between the Barossa and Rawdon ranges, in some places about ten miles in breadth, has been caused by a pseudo-volcanic agency; that is, by hot springs: but, he adds—

"The hornstone within the Barossa range has nothing similar to it in Europe, where it is usually a

combination of quartz and felspar; whilst the South Australian hornstone combines quartz, magnesia, and lime, which produce a variety of siliceous minerals of which I have never seen anything alike. The rock itself turns not merely round its own character in different shapes and colours, but it includes, at the same place, jasper, cornelian, chalcedony, opal, woodstone, and siliceous tuffa, altogether more or less varied by accidental ingredients of iron, magnesia, and lime. Common jasper and opal jasper form strata and veins in hornstone, and occupy sometimes the whole place of the rock. Chalcedony and opal occur in veins, which are very numerous, and both are botryoidal where pores and caves occur in the veins, without the least disposition to crystallization. Crystallized substances, besides sulphuret of iron, seem to be combinations of magnesia and lime; as bidderspar, rheticite, grammatite, &c. Silver-white foliated talc spreads through the whole rock, but seldom through chalcedony, and very frequently through opal and siliceous tuffa. The last is sometimes perfectly like that from the Geysers, in Iceland. There are two different series of siliceous tuffa: the first is quartz, and begins with porous hornstone or chalcedony, and ends in a spongy mass, like pumice; the other is in connexion with opal, takes the shape of siliceous ghur or hydrophan, and ends in a kind of freestone. Opal occurs in great abundance, partly as milk opal, partly as wax opal, fire opal, common opal, semi opal, and precious opal. The fibres of asbestos, which run frequently through the opal, give it a chatoyant lustre, and the enclosed talc looks exactly like silver in the mass. Veins of opal run in almost every direction through the hornstone, as well as through siliceous tuffa, without regular stratification; and if they be once opened, we shall have precious stones in great abundance. Red and blue striped opal-agate appears sometimes on the surface with dendritic manganese, which seems to form a vein in the interior; but it is red and yellow opal jasper which occupies often the places of hornstone, or forms regular strata in it.

"The veins of chalcedony run partly through a compact hornstone, partly through porous hornstone, and partly through woodstone or fibrous hornstone, and sometimes through wood asbestos or rock wood. It forms a kind of oyx with woodstone and with opal in zones, and is generally blue, bluish-white, or yellow, and forms a transition, through a red colour, into cornelian. The milk-white chalcedony, with enclosed fibres of asbestos, forms the cat's-eye, which is of frequent occurrence in Amianth-place, as well as in Flaxman-valley."

This peculiar formation is frequently interrupted by strata and beds of magnetic iron ore and white marble, or magnesian limestone; and it seems to be cut off by a formation of porphyry in the Hernanian range.

Primitive limestone (white marble) is found in great abundance in the mountains east of Gulf St. Vincent. Mr. Menge met with fifteen hills of it within the Barossa range, along the formations of hornstone, magnetic iron ore, and talc, or of magnesian rocks. Some has been found as fine-grained as that of the celebrated Carara in Italy.

On *Cornflower hill*, the *table marble* is easily separated into flags of any size. In Flaxman valley, the primitive limestone abounds with magnetic iron ore. The western slope of the Barossa range, along the Angas Park, from Light Pass to Salem valley, is entirely white marble. Even the springs which irrigate German Pass are impregnated with carbonate of lime. Within the Belvedere range there are several strata of transition limestone. The limestone on the plains is full of shells in a petrified state, and was formed from the ocean; that on the tops of hills seems to have had its origin from the primitive limestone usually deposited on elevations, along with a breccia of quartz pebbles connected by bog iron ore, as the superstratum on the primitive slates.

The tertiary limestone seems to be spread over a large part of the southern and eastern coasts of Australia; not merely through its plains, and around its shores, but also on its elevations. These different formations of lime indicate abundance of minerals.

Mr. Menge, who has geologically examined the Uralian mountains, and seen there lumps of malachite, or carbonate of copper, weighing more than a ton each (found between primitive limestone and clay slate), and lumps of gold 20 to 25 lbs. weight each (found between primitive limestone and mica slate), is of opinion that the corresponding strata in Australia will yield equally valuable products.

The lower slopes of all the mountain ranges are chiefly composed of slate; in the Mount Lofty range, generally *transition*, very much resembling the *greywacke* of North Wales. Proceeding to the east or southward, it becomes harder, and of a red colour; and still farther to the south, it appears as *flinty*, *mica*, or *hornblende* slate. The surface of earth on the slate is always grassy. The summit of Mount Lofty is capped with highly ferruginous sandstone; and the Mount Barker range exhibits a conglomerate of ironstone and angular pieces of quartz. The ferruginous sandstone and ironstone conglomerate is marked by stringy bark forest or brush.

Throughout the Adelaide range, says Mr. Dutton, granite shews itself in different places, principally in the beds of rivers, or at the bottom of deep gullies; sometimes also forming some of the high peaks, as in the Barossa range. Other heights are capped with the old red sandstone; and a recent oolitic limestone covers the clay slate of

many of the lower hills. The rock formations of this main range are, generally speaking, the same throughout. The stratified primitive rocks on each side of both the gulfs St. Vincent and Spencer begin from Cape Jervis, and extend to the northward for about 200 miles: they are generally, according to Mr. Menge, accompanied by a formation of gneiss on one side, and another of clay slate on the other side. The gneiss is frequently interlined with extensive banks or strata of granite, which often run out into pure quartz; and the clay slate occurs in all its modifications in colour and mixture.

On the *Mount Remarkable* range, the prevailing rock is a very hard white sandstone; and on the west coast, a coarse red sandstone prevails. Governor Grey, who examined this district, was of opinion that the range of mountains as far as Mount Arden abounds in minerals.

The prevailing rock in the neighbourhood of Franklin harbour is gneiss, and the adjoining hills are probably full of minerals.

On the western side of the head of Spencer's gulf, the hills are of red sandstone, in strata nearly horizontal. In other countries this formation is associated with coal, which will most likely be found in this neighbourhood.

At Lipson cove, on the west coast of Spencer's gulf, the rocks observed by Colonel Robe, when governor of the colony, in December, 1846, consisted of gneiss and hornblende schist, nearly vertical, and having a due course north and south. At Port Lincoln, the Gambier islands, Althorpe island, and apparently the south-west extremity of Yorke's peninsula, the governor found stratified limestone of recent formation, horizontal, and similar to that of Adelaide, resting immediately on granite, without the interposition of the transition or other secondary rocks.

The country to the south and east of Lakes Victoria and Albert, as far as Cape Bernouilli, consists of domes of sand, which are supposed to rest on a granitic reef or barrier, as granitic rocks are visible above the sea at Capes Morad and Bernouilli, and at other points on the coast. It is, therefore, presumed to be continuous, although the connexion is not at present visible.

Further south, the sand hills cease; no granite, igneous, or hard rock appears; the coast-line is wider and less elevated, and there are numerous low swampy plains, sub-

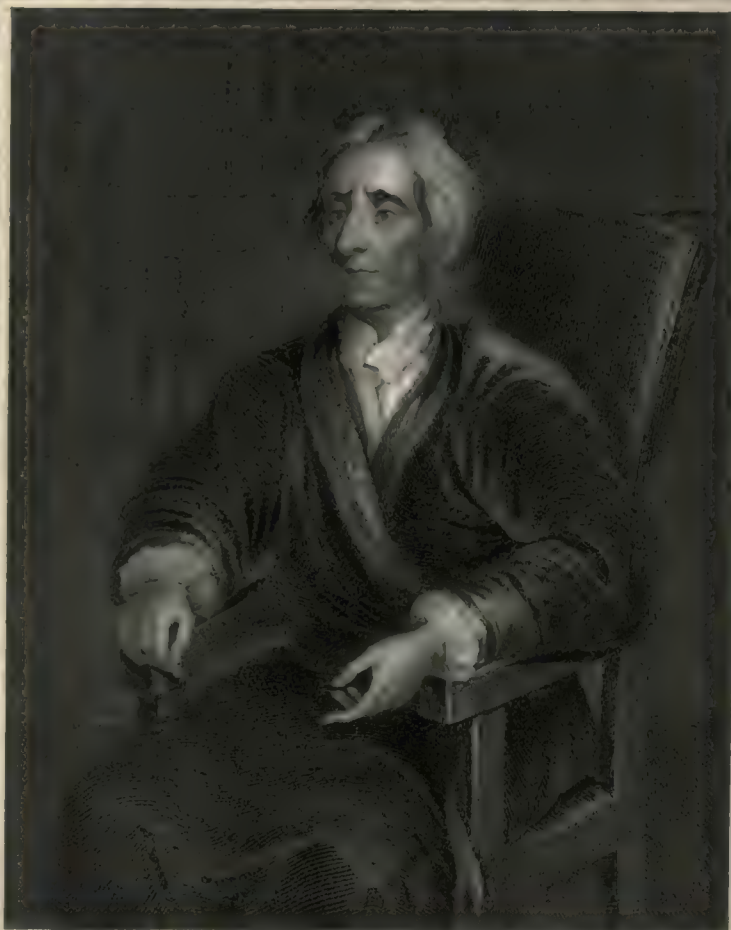
ject to periodical inundations, and strewed with cakes of calcareous tufa, some as large, and closely resembling a ship biscuit.

The hills around the plains are of limestone, as are also the rocks of the surrounding country. In the vicinity of Mounts Gambier and Schanck, for about twenty miles, the geological features change, from tertiary limestone and calcareous sandstone, to coral limestone, with numerous beds of chert, a siliceous rock containing the remains of marine animals and coral. Throughout this coral limestone and level tract there are deep holes, or wells, containing fresh water, one of which, of an oval form, measured eighty yards in diameter; the depth to the surface of the water, twenty-eight feet and a-half; and the depth of the water, 103½ feet; the colour of an intense indigo-blue. These wells are all in the immediate vicinity or within twelve miles of the volcanic mountains; and in the same neighbourhood are caverns containing the bones and teeth of animals of a larger size than any at present living in Australia. Some are supposed to belong to gigantic kangaroos, others to the canine race.

The descriptions of Mounts Gambier and Schanck have been given in the topography. At the base of Mount Schanck, to the south-west, there is a large accumulation of cellular basalt, which is bare, and presents a steep wall towards the plain. At Mount Gambier there is black and red lava, generally cellular; coral limestone is exhibited in the cliffs of the lake in the middle crater, and upon this there is a stratum of basalt; whilst on the upper parts of the mountain, or on the rims of the craters, there is volcanic tuff, containing fragments of lava.

MINERALOGY.—The preceding details of the geological strata will serve to introduce a sketch of mineralogical combination discovered in South Australia. Mr. Menge, who was the first person to direct attention to the mineral riches of the province, says that a rock in Australia is not confined to a compound of earthy substances, as is generally the case in Europe, but that it is often identified with metals, minerals, precious or ornamental stone, or with some earthy substance fit for lithurgical use. He thus classifies them in South Australia according to their order as receptacles of mineral wealth:

1. *Granite*—composed of quartz, felspar, and mica. *Rocks* depending upon *granite*—porphyry, sienite, serpentine, and greenstone. *Minerals* depending upon *quartz*—



JOHN LOCKE.

OB. 1704.

FROM THE ORIGINAL OF HIS LIFE, IN THE HALL OF
CHRIST CHURCH, OXFORD.

amethyst, chalcedony, chrysopras, and opal; ditto on *felspar*—Periklin, scapolithe, gawlerite, and topaz. Ditto on *mica*—talc, chlorite, plumbago, and ironrose. *Minerals inhabiting the rock of granite*—tourmaline (black and green), garnet, beryl or emerald, corundum, zircon. *Minerals in combination with granite rock*—usually (1) cobalt, with its associated metals, viz., bismuth, arsenic, silver, and antimony; (2) uranium; (3) tin, with its associated sheliun or wolfram, molybdena, and zinc; (4) lead—with its associated silver and arsenic; (5) copper—associated with lead and copper.

Gneiss ranks second in order, and as it differs only from granite by its stratification (and in South Australia by the proportion of its constituent parts), similar metals and minerals are to be found as in granite, but the laminated structure leaves more room for them in gneiss. Where *quartz* predominates in gneiss, the rock attains considerable altitude. Where *felspar* is most abundant, a disintegration or decomposition takes place, and the metals, including the protoxides and peroxides of iron, are protruded on the surface; where *mica* is in excess, magnesia is produced, and by chemical combination indurated talc, usually called soapstone, appears. The Australian soapstone differs from the kind usually found in Europe; it resists the disintegrating powers of the atmosphere, becomes hard in the fire, and takes a polish similar to cast silver, which it retains, not being subject to tarnish.

Mica Slate ranks third in South Australia, and is very extensively distributed; it consists of quartz and mica, and wherever the quartz is not compact, but granular, the rock is easily dissolved, and becomes sand. The ores in this rock are chiefly iron-mica, specular iron, and brown iron ores.

Primitive Limestone, fourth in order, but first in importance because of its metallic riches, when combined with clay slate, contains copper, lead, and zinc; iron is found in nests, veins, stocks, and caves. When blended with quartz, it forms an excellent millstone.

Hornstone (a compact quartz), fifth, often accompanies primitive limestone, or clay slate, when it is found to contain considerable quantities of copper ores. In this formation are found many ornamental stones or quartzose substances; such as chalcedony, cornelian, jasper, opal, and hydrophane; also the amphibolic substances—*asbestos* and *grammatite*.

Clay Slate, the sixth and most extensive formation in South Australia, abounds in metals, particularly in iron, lead, silver, copper, manganese, gold, and zinc. The ores are mostly indicated by its stratified quartz. The colour of this formation is usually grey, but varying to white and to blue slate. Where the quartz predominates, it changes into siliceous slate or touchstone; where the clay is in excess, alum slate appears.

To the above general view of the rocks containing the metallic riches of South Australia, it may be useful to add a definition of some technical terms which it would have been scarcely possible to have avoided employing.

When speaking of minerals, miners distinguish the ores or lodes according to their situation in the metalliferous ranges; thus (1) *strata*, or stratified ores running parallel with the rock; (2) *veins* crossing rocks at different angles; (3) *stocks* filling vertical caves in the rocks; (4) *reins* and *nests* scattered in masses; (5) *labyrinths* in zigzag or curved lines; (6) *chains* in links and scattered, and (7) *vaults*, heaped up in horizontal caves within the rocks. Copper ores in this last-named position are usually found lying loose, or in distinct heaps, whilst the rock is dissolved around.

The mineral and geological specimens which have been discovered up to the year 1846, are thus classified; I give the list, as prepared by Mr. Burr, in evidence of the internal resources of the province:—

IRON.—*Sulphurets.*

Rapid Bay:—general in the ranges, in limestone, quartz, hornstone, slates, and associated with other metalliferous minerals. Iron pyrites, crystallised in cubes and uncrystallised.

Montacute Copper Mine, and the metalliferous districts in its neighbourhood, Rapid Bay, Encounter Bay, &c. Iron pyrites, crystallised in pentagonal dodecahedrons.

Oxides.

Mount Gawler Range, Barossa Range, Mount Lofty Range, very general. Specular iron ore, massive, and lamellar, and granulated.

Near the Montacute Copper Mine. Brown hæmatite, radiated and fibrous.

Rapid Bay, Mount Barker, near the Montacute, and various other places. Brown hæmatite, compact.

Very general. Bog iron ore, and other earthy oxides of iron.

Very general, from Cape Jarvis to Black Rock Hill. Light River. Magnetic iron ore, crystallised and massive, varieties. Sienite.

Carbonate.

Rapid Bay, Barossa Range. Mount Lofty Range, and various other places. Carbonate of iron.

Phosphate.

Near Mount Rufus, and near Strathalbyn. Phosphate of iron, earthy.

MANGANESE—*Oxides.*

Rapid Bay, Myponga, the Horseshoe, Onkaparinga.	Black oxide of manganese, fibrous, diverging.
Rapid Bay, Light River, &c., &c.	Black oxide of manganese, massive.
Rapid Bay, Barossa Range, Mount Bryant, &c., &c.	Siliceous oxide of manganese.

EARTHY MINERALS—*Siliceous.*

Near Encounter Bay.	Quartz in dodecahedrons, with isosceles triangular faces.
In veins, generally amongst the metalliferous strata.	Quartz in hexagonal prisms with summits.
Near the Montacute Copper Mine, Flaxman's Valley.	Quartz in minute hexagonal prisms with summits.
Very general among the metalliferous strata; the cleanest specimens are from the neighbourhood of Mount Barker, the Barossa and Belvidere Ranges.	Quartz vein.

Belvidere Range.	Quartz vein, smoky.
Near the Montacute Copper Mine.	Quartz crystallised, rose-coloured.
On the Reach, at Rivoli Bay, at Mount Gambier.	Flint in nodules, black (not the chalk flint).
Barossa Range, Flaxman's Valley, twenty-five miles north-east of Adelaide.	Hornstone.

Flaxman's Valley.	Woodstone.
Flaxman's Valley.	Opal, brown, blue, milk white, wood, green, magnesian, brimstone-coloured, and other varieties, some with asbestos.

Belvidere Range.	Jasper opal.
Barossa and Belvidere Ranges.	Jasper, varieties.

Flaxman's Valley.	Chalcedony, blue.
Flaxman's Valley, and near Mount Barker.	Chalcedony, botryoidal.
Barossa Range.	Chalcedony, red, with opal.
Near the Kapunda Copper Mine.	Chalcedony, with jasper.

Flaxman's Valley.	Agate, red and blue striped, and moss.
Belvidere Range.	Prehnite, or zeolite, mammillated.

Barossa Range.	Prehnite, crystallised.
Belvidere Range, in the neighbourhood of Mount Barker.	Garnet, red.

About twenty miles north-east of Mount Barker.	Garnet, black (grenat noir).
Belvidere Range.	Cinnamon stone.
Mount Gambier.	Angite.
Mount Gambier.	Coccolite.
Belvidere Range, near Mount Barker, Flaxman's Valley, Encounter Bay, Strathalbyn, &c., &c.	Hornblende.

Flaxman's Valley, Barossa Range.	Grammatite, or tremolite, in limestone and in dolomite.
Lynedoch Valley, Flaxman's Valley.	Actynolite, green and brown, lamellar.
Flaxman's Valley.	Actynolite, green and brown, capillary.

Flaxman's Valley.	Actynolite, white.
Near Strathalbyn.	Actynolite, brown.
Belvidere Range.	Amianthus, or asbestos, flexible and common, occasionally traversing and woven through other minerals, as opal, hornstone spars, &c., &c.

Near Mount Barker.	Asbestos, with chalcedony, and siliceous tuffa.
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Flaxman's Valley, and east of Mount Barker.	Rock wood.
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Aluminous.

Barossa Range.	Fibrolite.
Belvidere Range.	Sappare, or kyanite, flowery, foliated, white and green.

River Gawler.	Clay, yellow, red, and white
Flaxman's Valley.	Clay, white, indurated.
South Adelaide.	Clay, variegated, unctuous.
Near Mount Barker.	Clay, variegated, red, white, and blue.

North Adelaide, 125 feet below the surface.	Pipe clay, red, white, and pink.
Gawler Plains.	Pipe clay, white.
Sources of the Angas.	Pipe-clay, white and pink.
Crystal Brook.	Clay, yellow and green.
North Adelaide, eighty feet below the surface.	Clay, blue, with iron pyrites.
Belvidere Range.	Alum slate and alum stone.
Near Mount Lofty.	Clay, green, indurated.
Mount Lofty Range.	Alum slate.

ALKALINE, EARTHY MINERALS—*Schorl, or Tourmaline, &c.*

Valley of the Nixon, near Encounter Bay.	Schorl, acicular.
Barossa Range.	Schorl, in nine-sided prisms with summits.
Encounter Bay.	Schorl, in prisms, with yellow mica.
Seven miles north-west of Mount Barker.	Schorl, black and green, in granite.
Barossa Range.	Schorl, black and green, in granite.
Near Rapid Bay, twenty-five miles north-east of Adelaide, and various places.	Schorl, varieties.

Valley of the Nixon.	Rubellite.
Barossa Range.	Beryl.
Barossa Range.	Epidote.

Talc.

Belvidere Range.	Earthy talc.
River Hutt, and twenty-five miles north-east of Adelaide.	Silver-white foliated talc.
Lynedoch Valley.	Indurated white, red, and yellow talc.
Twenty-five miles north-east of Adelaide.	Indurated red talc.
Barossa Range.	Green, foliated, indurated talc.
Mount Lofty Range.	Glanular talc, nacrite.
Belvidere Range.	Nacrite.

Mica.

River Gawler, twenty-five miles north-east of Adelaide, Valley of the Nixon, Barossa Range.	Mica, white, flowery.
Barossa Range, Valley of the Nixon.	Mica, black.
Barossa Range.	Iron mica.
Yankalilla.	White foliated mica, in large leaves

Felspar.

Barossa Range.	Felspar, foliated, glassy, and flesh-coloured.
East of Mount Barker.	Felspar, flesh-coloured.
East of Mount Barker.	Felspar, granular.

ACIDIFEROUS, EARTHY MINERALS.

Cliffs of the River Murray, and at Brighton, near Adelaide.	Sulphate of lime (gypsum), foliated.
Cliffs of the River Murray.	Sulphate of lime, in the form of shells.
Occasionally in small quantities, with ores of copper at the Kapunda Mine.	Fluate of lime, in cubes, with the edges and angles replaced.
Rapid Bay, Barossa Range, Belvidere Range.	Dolomite.
Barossa Range, Belvidere Range, Rapid Bay, near Mount Barker.	Bitter spar.
North-east of Adelaide, Rapid Bay.	Pearl spar.
Rapid Bay, Barossa Range.	Carara marble.
Rapid Bay, near Mount Barker, and ten miles north-east of Adelaide.	Marble, white, fine.

Ten miles north-east of Adelaide.	Marble, white and pink, fine.
Mount Barker, Rapid Bay.	Marble, white and grey.
Mount Barker, Rapid Bay.	Marble, grey.
Flinders' Range, Barossa Range, Mount Lofty Range, very general in creeks from the ranges where there is limestone.	Calcareous tuffa, cellular.
Depot Creek, near Mount Arden.	Calcareous tuffa, coralloidal.
Rapid Bay, Crystal Brook.	Calcareous tuffa, compact.
On plains at Lake Hawdon and Rivoli Bay.	Calcareous tuffa, in cakes.
On plains near Lake Hawdon.	Calcareous tuffa, in spherical balls.
On walls of wells near Mount Gambier.	Calcareous tuffa.
Near Rapid Bay, &c., &c.	Calcareous stalactites.
Barossa Range, Mount Barker.	Siliceous tuffa.
River Gawler.	Wavellite, stellated.

ACIDIFEROUS, ALKALINE MINERALS.

Crystal Brook.	Glauber salts, or sulphate of soda, efflorescent.
In lakes near Lake Victoria.	Chloride of soda.
Cliffs of the River Murray.	Nitrate of potassa, efflorescent.

ACIDIFEROUS, ALKALINE, EARTHY MINERALS.

Mount Lofty Range, Barossa Range.	Carbonate of magnesia.
Gorge of the River Torrens, ranges near Mount Barker, &c.	Alum, mammillated and efflorescent.

COMBUSTIBLE OR INFLAMMABLE MINERALS.

Near the Montacute copper mine.	Sulphur, native, enclosed in vein quartz with iron pyrites.
Belvidere Range, and about twenty-three miles north-east of Adelaide.	Graphite, or plumbago.
Cliffs of the River Murray.	Bitumen.

GEOLOGICAL SPECIMENS—*Granite, Granitic Rocks, and Igneous Rocks.*

Valley of the Nixon, near Encounter Bay, Cap Morard de Galles. Granite rock near the head of the Coorong. Cape Jaffa Reef, Yankalilla, near Mount Barker; in the Murray Scrub, at various places, protruding through the tertiary strata.	Granite, coarse red.
Cape Jervis, Yankalilla; granite rock, near the head of the Coorong, near Mount Barker, Cap Morard de Galles, Rapid Bay.	Granite, fine red.
Cap Morard de Galles, in nodules, embedded in coarse red granite.	Granite, fine grey.
River Torrens, about twenty-five miles north-east of Adelaide.	Granite, graphic (binary).
River Torrens, about twenty-five miles north-east of Adelaide, Barossa Range.	Granite, coarse white, with schorl.
River Torrens, about twenty-five miles north-east of Adelaide.	Granite, fine white, with schorl.
About three miles north of Cape Jervis.	Granite, white (binary).
Onkaparinga River, north-west of Mount Barker, Barossa Range.	Granite, binary, with black and green schorl.
North of Mount Barker.	Granite, fine and coarse, binary, white.
Flaxman's Valley, near Encounter Bay, east of Mount Barker.	Sienite.

Near Mount Arden.	Porphyry, red.
Barossa Range.	Porphyry, green.

Gneiss, Mica Slate, Hornblende Slate, &c., &c.

Lynedoch Valley, east of Mount Barker about six miles, Valley of the Nixon, near Encounter Bay, near Strathalbyn, River Torrens, about twelve miles north-east of Adelaide, Barossa Range, River Gawler, near Moorooro, North and South Rhines, and other localities, principally in those portions of the range which drain eastward towards the Murray River.	Gneiss.
To the east and south-east of Mount Barker.	Gneiss, passing into sandstone.
Near Mount Arden.	Mica slate, red and sandy.
River Bremer, near Mount Barker, Barossa Range, Yankalilla, Sources of the Angas, generally distributed, especially in those parts of the range which drain to the eastward towards the Murray River.	Mica slate.
Valley of the Nixon, twelve miles north-east of Adelaide, vicinity of Mount Barker.	Chlorite slate.
Barossa Range, Rapid Bay, about six miles south-east of Mount Barker.	Hornblende slate.

Argillaceous, Stratified Rocks.

Near Encounter Bay, near Mount Lofty, near Mount Arden, ten miles east of Mount Brown, Flinders Range, Mount Lofty Range, Brownhill Creek.	Grauwacke slate.
Willunga, near the Montacute Copper Mine, Rapid Bay, west of Mount Barker five miles, Cape Jervis, Kapunda Copper Mine, Horse-shoe, Onkaparinga, and country between that and Willunga, generally on the western slopes of the range.	Clay slates, various, some good roofing slates.
Flinders' Range, Mount Lofty Range, &c.	Flinty slate

Sandstones and Siliceous Rocks

At the base of Flinders' Range, to the westward, near Crystal Rock.	Quartz rock.
Between Rocky River and Crystal Brook.	Sandstone, fine white, granular.
About twelve miles north-east of Adelaide.	Sandstone, white, compact.
About four miles south-east of Mount Lofty.	Sandstone, red, micaceous.
Barossa Range, near the North Rhine.	Sandstone, slaty grey
Occur very generally in the ranges; they are frequently granular and ferruginous. There are quartzose sandstones, which are hard and good for buildings; some of the sandstones pass, by almost imperceptible gradations, into slate.	Sandstones, various.

Calcareous Rocks.

Barossa Range, Rapid Bay.	White marble, similar to Carara.
Near Mount Barker.	White marble, and veined white and grey.

About twelve miles north-east of Adelaide.	White marble, and veined white and pink.
River Hutt, Barossa Range, near Mount Barker, Rapid Bay.	White crystalline limestone, coarse-grained.
Rapid Bay.	White and grey slaty limestone.
Rapid Bay, near Mount Barker.	Grey limestone, compact.
Near Mount Arden.	Variegated compact limestone.
Near Mount Gambier.	Compact limestone.
Near Mount Gambier and Mount Schanck.	Coral limestone.
Plains near Cape Jaffa.	Compact limestone, with fossil remains of univalve shells.
Salt Creek.	Arenaceous limestone, with fossil remains of shells, partly bivalve.
Over the whole of the country described as tertiary and recent.	Fossil limestone.
Dunes of sand on the Coorong.	Calcareous sandstone, in flags.

The chief ores of some of the principal mines in South Australia, are stated to be as follows:—

Kapunda Copper Mine.—The best varieties of sulphurets, as vitreous copper or copper glance, purple copper ore, grey copper ore, the black sulphuret of copper, and the blue and green carbonate of copper, which are generally mixed with earthy matter. These have formed the principal ores which have been exported; but there has also been a considerable quantity of the muriate of copper, and native copper, crystallised in octahedrons.

Burra-Burra Copper Mine.—The protoxide of copper, or ruby copper ore, and carbonate of copper. The protoxide of copper is generally in veins, of greater or less thickness, traversing the oxide of iron; some of the mixed specimens from the Burra-Burra mine are exceedingly beautiful. A rich ferruginous, red oxide of copper has also been procured in considerable quantities. The sulphurets of copper are scarce.

Montacute Copper Mine.—Copper pyrites, generally variegated. Carbonate of copper is also met with, and some of the finest specimens of this ore have been from the Montacute mine.

Rapid Bay.—Ores of copper similar to those of the Montacute mine.

Mount Barker Copper Mine.—Ores a red oxide, containing a small portion of iron and silica, and the blue and green carbonate of copper, generally earthy.

Copper Mine about twenty miles north-east of Mount Barker.—A good kind of the sulphuret of copper, variegated.

Wakefield Copper Mine.—The carbonate of copper, with iron ore, and sulphate of barytes.

Glen Osmond Lead Mines.—The sulphurets, or galena, crystallised in cubes, and granular; and the corneous lead ore, a murio-carbonate of lead.

Rapid Bay.—Galena in cubes, and blue lead ore pulverulent.

Yorke Peninsula, between Gulfs St. Vincent and Spencer, is said to contain abundance of minerals; and in the district of Franklin harbour, 150 miles north of Port Lincoln, varieties of the blue and green carbonate of copper have been recently discovered.

The length and breadth of some of the lodes of copper in South Australia, surpass anything of the kind, even in South America; at the celebrated *Burra-Burra* mines, in particular (see map), the metal "crops out" of the surface in such quantities, that hundreds of tons may be removed without sinking a shaft; it resembles *quarrying* in metal, rather than mining. In one place, where a shaft has been sunk, it seems like working in a bed of solid copper.

Lead, in the same manner, especially at the *Wheat-Walkins* mine, has been found "cropping" through the surface; the ore of this mine sent to England, yielded seventy-five per cent. of lead, and about 30s. of silver to the ton of ore, which may be raised at the mine at less than 20s. per ton.

Several other minerals have been found, as well as copper and lead. Native gold, containing a small portion of silver, exists about half a mile north of the Montacute copper mine, ten miles north-east of Adelaide. It is also said to be obtainable in several other places. I have seen some fine grains of gold interspersed with black sand, said to have been found in the bed of the Torrens river. Further details will be given, when examining the staple products of the province.

THE SOIL, of course, varies throughout a wide extent of country; that on which the city of Adelaide is built is remarkable for containing in abundance the elements necessary for vegetable production. In North Adelaide every kind of English and tropical fruit may be found growing in perfection; the banana and the gooseberry side by side. The produce of the fruit-trees is no less abundant in quantity than rich in flavour: yet the appearance of the soil would scarcely indicate such a favourable return to the industry of man.

A portion of the surface soil, and of the subsoil, taken from the garden (which had not been manured) of Mr. George Stephenson, in North Adelaide, was brought to England by Mr. Dutton, and submitted to analysis by Dr. Ure (23rd of February, 1846), when the following results were produced:—**Surface soil**—Sulphate of lime, or gypsum, 75; phosphate of lime, 2; moisture, 2; combustible vegetable matter, 2; oxide and phosphate of iron, 6; fixed alkaline salts, containing some of the valuable potash salt (these are muriates of soda and potash), 4.5; silica and a little alumina, 8.5; a trace of magnesia; = 100. **Subsoil**—Sulphate of lime, 53.33;

phosphate of lime, 2; oxide and phosphate of iron, 5.50; moisture expelled at red heat, 15; fixed alkaline salts, 3.50; silica, with a little alumina, 20.67; a trace of magnesia; = 100. This distinguished chemist says, "I have devoted much time and pains to the analysis of the soils; they are the most singular I have ever examined, or even heard of: they must be very fertile, as they contain all the elements necessary for the nourishment of plants."

Dr. Ure examined samples of wheat and barley from Adelaide, and determined their value by the specific gravity of the corn, which he compared with English prize wheat, thus:—wheat from South Australia, specific gravity, 1.400; English prize wheat, 1.340; barley of Adelaide, 1.285. The nutritive quality of the soil of South Australia, as evinced in the growth of grain, is greater than that of England.

The extent of limestone formation in the colony would indicate an abundance of arable land; while the slate formation furnishes a great variety of pastoral districts. It is probable that, in future years, the amount of cultivable soil will be largely increased in Australia, by reason of diminished terrestrial heat, owing to the more rapid disintegration of calcareous rocks, cooling in the surface of the earth, a clearing of the indigenous forests, less immediate absorption of the periodical rains, and a greater retention of surface-water, indispensable in an Australian climate for pastoral and agricultural pursuits.

CLIMATE.—South Australia, from its latitudinal position, absence of snow-clad mountains, and, as regards Adelaide, from its inland situation, has a higher temperature than Melbourne, and may be said to range more nearly with Sydney, New South Wales, with Perth in Western Australia, and with Palestine in Asia Minor. It is very salu-

brious; and, as the soil becomes more cultivated, will probably possess a more equable thermometrical range. The southerly winds, which prevail for the greater part of the year, arrive cool and refreshing from the Pacific, and have an exhilarating influence. During winter (June, July, and August) hoar-frosts occur at Adelaide. The atmosphere of South Australia is an excellent remedial agent for alleviating the diseases of Europe or of Asia.

The general temperature of Adelaide is somewhat higher than that of Perth, the capital of Swan River, as shown by the following abstract of observations of the thermometer of Fahrenheit, in the year 1844:—

Months.	Adelaide.		Perth.		Difference.	
	Max.	Min.	Max.	Min.	Max.	Min.
January . .	101	66	97	52	4	14
February . .	103½	64	100	67	3½	17
March . . .	95	64	89	48	6	16
April . . .	86	53	87	35	1	18
May . . .	76	50	72	37	4	13
June . . .	68	48	65	30	3	18
July . . .	60½	48	61	31	0½	17
August . .	68	48	58	31	10	17
September .	70½	49	68	36	4½	13
October . .	96½	50	78	40	18½	10
November .	93½	53	92	40	1½	13
December .	103½	53	96	41	7½	12

The mean quantity of rain falling, throughout the year, in the following places, is—in Adelaide, 20 inches; Hobart Town, 19; London, 21; Manchester, 36; Liverpool, 34; Launceston, 40; Kendal, 53; Dumfries, 36; Glasgow, 21; Arracan, in July and August, 103; Tropics generally, 115; Bombay, 106; West of England, 57. Annual variation in London, 75 per cent.; Adelaide, 38.

The annexed meteorological register is for Adelaide:—

Month.	Temperature.			Mean Temperat. at Noon.	Rain.		Winds.		
	Highest	Lowest			Days.	Inches.	Hot.	Warm.	Cool.
November, 1839 . .	73° 82° 75°	58° 60° 53°		68°	14	3.330	0	10	23
December	94 106 95	62 65 52		82	5	.345	1	14	21
January, 1840 . .	92 103 87	65 74 66		87	3	.335	2	5	26
February	80 94 79	70 68 64		82	5	2.010	3	3	20
March	71 100 88	66 17 64		71	7	.445	2	13	27
April	74 91 77	53 62 57		75	10	1.119	0	17	25
May	60 81 63	50 61 55		69	8	1.597	0	25	13
June	54 69 55	48 58 51		60	11	3.247	9	24	11
July	50 96 55	48 58 51		62	8	1.900	0	25	10
August	63 78 67	52 54 48		62	16	3.040	0	24	11
September	70 83 67	49 54 52		65	16	4.540	0	22	11
October	76 84 83	60 56 62		79	0	1.900	1	21	16

The following is an abstract of the rain-gauge kept in Adelaide for the seven years ending December 31, 1846:—

Months.	Average Days.	Maximum.	Minimum.	English Average.
WINTER:—				
May . . .	11	3.58	0.25	1.85
June . . .	11	3.70	1.72	1.83
July . . .	14	3.06	0.86	2.52
August . .	16	4.77	1.66	1.45
September	11	4.64	0.44	2.19
October . .	10	2.74	0.94	2.07
SUMMER:—				
November	8	3.31	0.02	2.40
December .	5	3.82	0.35	2.43
January . .	4	0.45	0.21	1.48
February . .	4	2.01	0.35	0.75
March . . .	5	1.00	0.44	1.44
April . . .	10	3.58	0.38	1.79

The following abstract of a table, carefully compiled from the meteorological journal in the land-office, for the years 1844, 1845, and 1846, by permission of the government authorities, and extended back to 1839 by private observations, will exhibit the manner in which the warm and cold winds are distributed on this coast during the summer and winter months:—

Months.	Hot.	Warm.	Cool.
SUMMER:—			
November	—	9	21
December	1	8	22
January	2	4	26
February	3	3	23
March	1	6	24
April	2	11	14
WINTER:—			
May	2	20	9
June	—	20	10
July	—	22	9
August	—	23	8
September	—	20	10
October	1	13	17

The salubrity of the province is shewn in the returns of births and deaths.

Return of Births which have taken place.

Year.	Registered.	Unregistered.	Total.
1840	416	30	446
1841	544	30	574
1842	641	60	701
1843	650	60	710
1844	671	60	731
1845	708	100	808
1846	937	200	1,137
1847	994	200	1,194
1848	—	—	—
1849	—	—	—
1850	—	—	—

Note.—The unregistered returns are below the official estimate.

Return of Births and Deaths to Inhabitants.

Year.	Inhabitants to One Death.	Inhabitants to One Birth.
1840	39.8	32.7
1841	54.5	26.5
1842	76.5	23.0
1843	111.3	24.5
1844	139.8	26.0
1845	100.3	27.6
1846	80.0	24.6
1847	63.9	25.9
1848	—	—
1849	—	—
1850	—	—

Comparison of Births and Deaths to Inhabitants in other Countries.

Countries.	Inhabitants to One Death.	Inhabitants to One Birth.
England	46.4	35.2
Russia	33.0	25.5
France	33.0	27.0
Netherlands . .	27.5	21.0
Italy	24.4	30.6

We have no return of the maladies treated in the Government Hospital at Adelaide, or of their proportionate mortality; the following shews the number of patients treated in the Government Hospital during the years 1844, 1845, 1846, and 1847:—

Year.	Admitted on payment of Fees.	Admitted without Fees.	Discharged.	Died.
1844	4	34	30	8
1845	15	50	53	12
1846	13	64	61	16
1847	30	109	120	15

The subjoined table is an abstract of the register of interments at Adelaide, from 1844 to 1847:—

Month.	1844.			1845.			1846.			1847.		
	Adult.		Children	Adult.		Children	Adult.		Children	Adult.		Children
	M.	F.		M.	F.		M.	F.		M.	F.	
January	2	2	8	0	2	16	1	1	13	4	5	36
Feb.	4	2	6	3	3	21	7	2	40	11	7	45
March .	1	1	7	2	0	26	3	2	28	5	6	27
April .	1	2	9	3	4	12	6	6	19	8	5	21
May . .	1	2	11	3	1	9	9	2	26	11	3	23
June . .	2	3	6	9	1	7	9	3	14	4	6	15
July . .	1	2	3	5	3	6	1	4	10	9	6	9
August.	4	3	6	2	3	8	9	1	7	7	1	22
Sept. .	0	2	3	2	4	3	2	13	15	2	2	29
October	4	3	6	4	4	8	3	15	5	7	20	29
Nov. .	4	1	8	7	1	7	4	4	26	11	2	25
Dec. .	3	2	11	11	6	16	7	4	36	9	9	25
Total .	27	25	84	51	22	140	67	34	247	99	59	327

Note.—The population in these years was—1844, 18,999; 1845, 22,300; 1846, 28,000; 1847, 31,000. The two last years are an approximation.

CHAPTER III.

POPULATION, CLASSIFIED AND BY DISTRICTS—RELIGION—EDUCATION—NEWSPAPER
PRESS—CRIME—LAWS—GOVERNMENT—NEW CONSTITUTION—
LIST OF LIEUTENANT-GOVERNORS.

THE colonizing character of the British race was never more strikingly manifest than in the province we are now examining. Fifteen years ago there was not an Englishman in South Australia; now (July, 1850) there are about 50,000 happy, prosperous, and loyal subjects of Queen Victoria in the settled portions of the colony; of whom about 5,000 are Germans, and the remainder immigrants from England, Wales, Scotland, and Ireland, and their descendants.

On the 9th of November, 1836, the first vessel arrived, with emigrants from England, at Glenelg, between five and six miles distant from the site of the present city of Adelaide. The subsequent augmentation of the population of the colony is thus shown:—

Year.	Males.	Females	Total.	Aborigines, estimated.
1837	—	—	200	—
1838	—	—	5,000	1,600
1839	—	—	9,000	1,600
1840	—	—	10,000	1,600
1841	—	—	14,600	1,600
1843	—	—	16,516	1,600
1844	9,526	7,670	17,366	1,600
1845	12,388	9,371	21,759	1,600
1846	14,711	11,182	25,893	1,600
1847	17,531	13,622	31,153	3,680
1848	21,527	17,139	38,666	3,730
1849	—	—	—	—

According to the government census of 1844, the ages and sex of the population in the colony was—

Age.	Males.	Females.	Total.
Under 2 years . . .	890	834	1,724
2 to 7 " . . .	1,459	1,434	2,893
7 to 14 " . . .	1,322	124	1,446
14 to 21 " . . .	922	866	1,788
21 to 45 " . . .	4,432	2,996	7,428
45 to 60 " . . .	457	281	738
60 and upwards . .	44	18	62

Of married—males, 3,026; females, 3,032.

The classification by occupations showed—professional persons, landed proprietors, merchants, and bankers, 990; shopkeepers or retailers, 319; mechanics and artificers, 986; shepherds, &c., 763; stockmen in care of cattle, 298; gardeners and farm servants, 1,838; domestic servants, 742; others, not

included in the foregoing, 11,260. Classed by religion—Church of England, 9,418; Church of Scotland, 1,691; Wesleyans, 1,666; other Protestant dissenters, 3,309; Roman Catholics, 1,055; Jews, 25; Mahomedans and Pagans, 32. The number of houses was—of stone or brick, 1,346; wood, 1,142; other materials, 903 = 3,391.

Population of Adelaide and the neighbourhood in 1844 and 1846.

—	Males.	Females.	Total.
Port Adelaide	717	623	1,340
North Adelaide	840	800	1,640
South Adelaide	2,299	2,138	4,437
South-west of Adelaide . . .	880	813	1,693
South-east of Adelaide . . .	535	478	1,013
East and North-east of Adelaide	362	314	676
Total in 1844	5,633	5,166	10,799
" in 1846	6,826	6,214	13,040

Abstract of the Census in April, 1846.

Districts.	Area in sq. miles.	Males.	Females.	Total.
Milner Spe. Survey	600*	706	493	1,194
N. of Gawler Town	2,300*	348	110	458
Wakefield and Hutt	8,500*	631	131	762
Moorundie	100*	58	8	66
Wellington	200*	93	12	105
Mount Crawford . . .	400*	320	210	530
Little Para River . . .	210	462	369	831
Port Adelaide	48	816	713	1,529
North Adelaide	27	929	914	1,843
South Adelaide	4	2,902	2,668	5,570
S.W. of Adelaide . . .	45	965	892	1,857
S.E. of Adelaide . . .	31	688	584	1,272
E. and N.E. of Adel.	45	526	443	969
Sturt and Onkaparinga Rivers.	68	212	176	388
O'Halloran Hill, &c.	50	392	320	712
S. of Onkaparinga	67	334	248	582
Sources of ditto . . .	210*	780	672	1,452
Meadows Special Survey	162*	301	243	544
Finniss and Angas Special Survey	247*	308	167	475
Encounter Bay, &c.	240	158	107	265
Port Lincoln	—	85	47	132
Kangaroo Island . . .	1,500*	—	—	70
N. of Rivoli Bay . . .	2,700*	230	21	251
S. of Rivoli Bay . . .	8,400*	248	15	263
Yankallilla, &c. . . .	110	91	47	138
Cape Jervis	200	92	40	132
Total	26,464	12,670	9,650	22,390

Note.—Marked thus (*) are uncertain, boundaries not strictly defined.

NUMBER OF EACH AGE.—*Males.*—Under two years of age, 1,019; two and under seven, 2,143; seven and under fourteen, 1,606; fourteen and under twenty-one, 1,088; twenty-one and under forty-five, 6,111; forty-five and under sixty, 629; sixty and upwards, 74. *Females.*—Under two years of age, 953; two and under seven, 2,101; seven and under fourteen, 1,460; fourteen and under twenty-one, 981; twenty-one and under forty-five, 3,696; forty-five and under sixty, 410; sixty and upwards, 49.

MARRIED OR SINGLE.—*Males.*—Married, 3,847; single, 8,823. *Females.*—Married, 3,811; single, 5,839.

RELIGION.—Church of England, 11,945; church of Scotland, 1,958; Lutheran church, 1,524; Wesleyan methodists, 2,246; other protestant dissenters, 2,888; Roman catholics, 1,649; Jews, 58; Mahomedans or Pagans, 52.

OCCUPATION.—Land proprietors, merchants, bankers, and stockholders, 1,152; clerks and overseers to the above, 162; professional persons, 109; clerks and assistants to the above, 35; manufacturers, brewers, millers, 82; clerks and assistants to the above, 46;

shopkeepers and other retail dealers, 338; clerks and assistants to the above, 160; brickmakers, 77; bricklayers, 83; smiths, 152; carpenters and joiners, 362; masons, 92; shoemakers, 225; cabinetmakers, 24; plasterers, 38; harness-makers, 19; tailors, 62; tanners, 19; miners, 269; sawyers and splitters, 240; shepherds and others in charge of sheep, 1,120; stockmen and others in charge of cattle, 215; carriers and their assistants, 134; gardeners, farm-servants, and persons employed in agriculture, 1,492; mariners and fishermen, 85; domestic servants, 818; labourers not included in the above definitions, 726; all other persons not included in the above, 13,993.

HOUSES.—Stone or brick, 1,715; wood, 1,272; other materials or tents, 1,189 = 4,176.

On the 1st of January, 1848, the population of the colony was about 38,666 souls; on the 1st of January, 1849, it was 45,907; it is now estimated at not less than 50,000.

The following is an analysis of the increase since the commencement of 1845:—

Description of Increase.	1845.	1846.	1847.	1848.
Immigrants whose passage was defrayed from the land fund	172	1,469	3,257	6,622
Excess of immigrants arriving at their own cost, over emigrants from the Province	2,118	2,088	1,504	
Excess of births over deaths registered	470	577	499	891
Total	2,760	4,134	5,260	7,513

The following is a comparative return of the number of births, marriages, and deaths:

Births.

Sex.	1844.	1845.	1846.	1847.	1848.
Males	354	380	483	544	—
Females	317	328	454	450	—
Totals	671	708	937	994	1,239

Marriages.

Solemnized.	1844.	1845.	1846.	1847.	1848.
Church of England	57	77	139	218	—
Church of Scotland	21	29	21	20	—
Roman Catholic Chapel . . .	10	10	17	45	—
German Lutheran Church . .	6	2	17	22	—
Congregational Chapel . . .	11	9	13	23	—
Methodist Chapel	2	11	10	7	—
Primitive Methodist Chapel .	—	—	2	2	—
By Dep. Registrar, Adelaide .	1	—	—	—	—
" " Port Lincoln	—	3	—	—	—
" " Missionaries	—	—	—	9	—
Of the Jewish Religion . . .	—	—	—	1	—
Totals	108	141	219	347	320

Deaths.

Age.	1844.	1845.	1846.	1847.	1848.
7 Years and under	81	147	244	317	—
From 7 to 14 years	4	8	15	20	—
" 14 to 21 "	4	6	6	16	—
" 21 to 30 "	17	19	19	39	—
" 30 to 40 "	20	28	31	53	—
" 40 to 50 "	6	22	26	32	—
" 50 to 60 "	5	3	12	12	—
" 60 to 70 "	2	3	5	4	—
" 70 to 83 "	1	2	2	2	—
Total	140	238	360	495	510

The proportion of male to female deaths is thus shewn:—

Sex	1844.	1845.	1846.	1847.	1848.
Males	75	143	208	301	—
Females	63	95	152	194	—
Total	138	238	360	495	—

The preceding returns merely show the number of births, marriages, and deaths actually registered in the province; there is, at present, no satisfactory means of estimating the number of those unregistered.

RELIGION.—It is gratifying to observe that from the very foundation of South Australia as a colony, a right appreciation has been evinced of the value of the ordinances of our holy religion; the first emigrants were accompanied by a minister of the gospel, and a church (in frame) for the celebration of religious worship, was forwarded from England. The late Rev. C.B. Howard, colonial chaplain, arrived in the colony, with Governor Hindmarsh, in December, 1836. His ministrations were gladly accepted, his person much respected, and to this worthy disciple of the cross we owe the foundation of the church of Christ in South Australia, which is now the seat of an episcopate of the church of England and of the church of Rome. The church of England bishopric was endowed in 1847 by one of the munificent grants

prompted by the practical piety of Miss Burdett Coutts, a lady whose name cannot be mentioned without adding the passing tribute of respect due to her from every British sub-

ject really interested in the abiding welfare of his country.

The relative numbers and position of the different denominations is thus shown:—

Return of the Number and Description of Places of Worship in South Australia, which specifies the locality, amount of accommodation, and average congregation of each.

Denomination.	Adelaide.	Port Adelaide.	Villages near Adelaide.	Willunga District.	Encounter Bay.	Gawler Town.	Koorunga.	Mount Barker.	Totals in 1847.
Church of England:									
Places of worship .	2	1	2	—	—	1	—	3	9
Adapted to contain .	1,050	200	310	—	—	260	—	330	2,150
Average congregation	750	120	160	—	—	80	—	200	1,310
Church of Scotland:									
Places of worship .	2	—	—	—	—	—	—	—	2
Adapted to contain .	750	—	—	—	—	—	—	—	750
Average congregation	200	—	—	—	—	—	—	—	200
Dissenting Chapels:									
Places of worship .	9	1	16	3	1	4	1	4	39
Adapted to contain .	1,950	100	1,640	350	100	1,060	240	440	5,850
Average congregation	1,230	80	660	145	30	790	240	220	3,395
Society of Friends:									
Places of worship .	1	—	—	—	—	—	—	—	1
Adapted to contain .	100	—	—	—	—	—	—	—	100
Average congregation	12	—	—	—	—	—	—	—	12
Roman Catholics:									
Places of worship .	1	—	—	1	—	—	—	—	2
Adapted to contain .	700	—	—	150	—	—	—	—	850
Average congregation	530	—	—	50	—	—	—	—	580

Since the foregoing return was made, several other temples dedicated to the worship of the one true and living God have been erected, and others are in progress; the structures are neat, and the pews, &c. formed of cedar-wood. Due provision has therefore been made by every class of Christians, among whom entire harmony prevails, much to the benefit of practical Christianity, and its essential attributes of charity, peace, and good-will to all. Public worship is celebrated twice on Sunday, the religious festivals of the year are kept as in England, and nearly every church and chapel has a Sunday-school attached.

The state of the religious denominations in 1848, irrespective of the church of England, is thus shewn:—

The *Presbyterians* are divided into the *Scotch Church* and the *Scotch Secession* (voluntary) *Church*.

The *Independents* have five chapels and ministers, and five Sunday schools, consisting of about 600 children.

The *Wesleyan Methodists* have twelve chapels, also schools and branch societies in many places throughout the province. The out-stations are visited from time to time by ordained ministers, who are assisted in their arduous labours by thirty local preachers, and by the employment of this lay agency faci-

ties are afforded for supplying the wants of a scattered community.

The *Primitive Methodists* have five chapels, about 220 scholars in their Sunday schools, and several excellent local preachers, superintended by an exemplary itinerant minister.

The *Baptists* and "*Immersed Believers*," two chapels; the *Christian Brethren*, two chapels; the *Union* denomination, five chapels; the *New Church* or *Swedenborgians*, one chapel, and the Jews a Synagogue.

The *Roman Catholics* have five chapels, and their church is confided to the superintendence of a suffragan bishop under the metropolitan hierarchy of Sydney, New South Wales. Considerable sums have been subscribed towards the erection of a cathedral at Adelaide; and at a public meeting called by their bishop the Roman Catholics unanimously resolved to forego any further participation in the support or assistance provided by an act of the colonial legislature, deeming it inexpedient and incompatible with Christian liberty to comply with the stipulations appended to the grant. The indefatigable bishop and ministers of the Roman Catholic church are very zealous in their efforts for education, and in the maintenance of their faith.

The German immigrants who abandoned their native land chiefly on account of the

religious persecutions to which they were subjected, and who belong, for the greater part, to the evangelical Lutheran church, have places of worship and pastors for their settlements of Klemzig, Hahndorf, Langmeil, Lobenthal, and Bethany. Each place of worship has a school attached, and the members of the church are required to send their children regularly to the same, from the sixth to the fourteenth year of their age. There are three or four German pastors in the colony; indeed each body of emigrants is accompanied by a minister from their "fatherland."

In June, 1849, the services of the church of England were celebrated in twenty places; of the church of Scotland in four; of the Roman catholic in three; of the society of Friends in one; and by the other denominations of Christians (of whom the Wesleyans are the most numerous), in forty-eight chapels; making, in the whole, seventy-six places of worship in this still infant colony. The government have granted 284 acres of land for the sites of churches, chapels, cemeteries, glebes, and schools, on fourteen applications from the church of England, two from the church of Scotland, two from the Wesleyans, and four from the Roman catholics. Since the foundation of the colony, the local government has contributed £2,157 towards the erection of church of England edifices, and private individuals, £16,689. The amount of the several sums subscribed by other denominations is not known.

An ordinance (No. 10, of 1847), was passed by the local government, to promote the building of churches and chapels for Christian worship, and to provide for the maintenance of ministers of the Christian religion. This ordinance came into operation 1st April, 1848, and was to continue to 1st April, 1850. Up to June, 1849, the church of England had received, under the provisions of this ordinance, in aid of erections, £1,325; in aid of clergy stipends, £464; church of Scotland, £300 and £68: Wesleyan church, £94 and £153: making in all, for ecclesiastical buildings and stipends, £2,406. The aid is issued to the extent of £50, in cases where the population being equal to fifty persons, a sum not less than £50 has been raised by private contributions for a church, chapel, or minister's dwelling; and the issue may be increased to any sum not exceeding £150, provided an equal or greater amount of pri-

vate contribution shall have been paid up and deposited, or secured to the satisfaction of the governor and executive council. The aid to the stipend of the minister is fixed at rates having reference to the number of sittings (one-fourth part being free of any charge), rented and paid for in any church or chapel; the stipend, however, in no case exceeding £200 per annum. The *South Australian Church Society*, in connexion with the church of England, has an income of about £500 a-year arising from donations and subscriptions; and its objects are the assisting in erecting churches, and maintaining religious worship and Christian education in the metropolis and in the rural districts of the colony. The *Australian Mining Company of London* have built a chapel and school-house at their mines; and, generally speaking, there is a deep feeling of piety manifest among all classes throughout the province.

EDUCATION.—Where the responsibilities of the Christian religion are felt by the legislature, the duty of imparting sound instruction will not be neglected; neither is it so in South Australia. An ordinance of the local government (No. 2, of 1847), for the furtherance of education, grants to schoolmasters an allowance, in aid of their emoluments, of £20 per annum for the first twenty scholars, and £1 per annum for every additional scholar, beyond twenty, at school; the total not to exceed £40 to each school in one year. When this ordinance came into operation on the 31st March, 1849, thirty-three schoolmasters, already in the field, became immediate claimants for a sum of about £1,000 per annum. Among other scholastic institutions now in existence, there is now at Adelaide a well-conducted grammar-school, with 300 pupils, chiefly of the labouring classes, for whom a commodious school-house has been erected by the liberal subscriptions of a few benevolent persons. On 24th May, 1849, the bishop of Adelaide laid the foundation stone of a church of England collegiate school at St. Peter's, Adelaide, for which the local government granted 111 acres of land, and towards which Mr. William Allen, of Buckland-park, Adelaide, a large proprietor in the Burra-Burra Mining Company, gave the munificent donation of £2,700. It is intended that this collegiate school shall eventually merge into a college, and accordingly, excellent statutes and regulations have been laid down for its government. The holy scriptures are

to be taught in the original tongue, and the principles of the Christian religion carefully inculcated. To this most necessary knowledge is to be added instruction in any language, art, branch of science, or literature, which shall, from time to time, be deemed by the visitor and governors of the school important to constitute a sound and liberal education. The property and management of the collegiate school is vested in a council of fifteen governors, of whom not less than three, nor more than five, shall be clergymen of the church of England. Every lay governor, on accepting office, must sign a declaration that he is a member of the church of England, and that he considers the thirty-nine articles of the Book of Common Prayer to be agreeable to the revealed Word of God. The bishop of Adelaide, for the time being, shall be the visitor, and have power, at any time, to enter the school, examine and instruct the scholars, inspect the accounts and general management of the institution, correct abuses, and prevent the adoption of any bye-laws that might contravene the fundamental principles of the school, or frustrate the intentions of the original founders. The decision of the visitor, on any disagreements among the governors, shall be final. The head master must have graduated in arts or civil law in one of the universities of the United Kingdom, and his appointment rests with the governors.

Education is extending very generally throughout the province. In 1849, there were eighty-one day-schools, attended by 2,900 children, and forty-five Sunday-schools, attended by 2,500 children, in South Australia. There is also at Adelaide a school for the instruction of the children of the aborigines, where, in 1849, there were forty male and eighteen female scholars, who cost the local government £10 9s. 7½d. each, per annum, for education, food, and clothing. The following is a comparative return of Sunday and other schools in the province of South Australia, and of the average number of scholars attending them:—

Schools and Scholars.	1844.	1845.	1846.	1847.	1848.
Scholars, European male . .	870	1,397	1,402	1,987	2,933
" " females . .	856	1,272	1,210	1,910	2,469
" Native male . .	85	74	76	100	40
" " female . .	67	58	62	56	18
Total Scholars . . .	1,878	2,801	2,750	4,053	5,460
Number of Schools . . .	45	81	68	86	127

Mr. Mundy, late the secretary of South Australia, who most ably fulfilled the duties

of his office, and carefully collected various statistical returns, says of this document—"The information contained in this return has been obtained from private sources, not from authentic official records, and its accuracy cannot, therefore, be confidently relied upon."

THE PRESS of South Australia dates its origin previous even to the foundation of the colony. On the eve of the departure of the governor and emigrants from England, the first number of the *South Australian Gazette* was printed and published in London, on the 18th June, 1836. The second number of the *South Australian Gazette* was issued at Adelaide on the 3rd of June, 1837. Other newspapers soon started into existence, and there were subsequently issued a *Government Gazette*, *Southern Australian*, *Adelaide Observer*, *Adelaide Times*, a mining journal, &c. A well conducted *South Australian Magazine* was issued monthly, and the two *South Australian Almanacks*, which have been published annually for several years, are a credit to the colony, for the valuable mass of facts which they contain, and the moderate tone in which their able digests are written.

The extension and progressive increase of literature, and of newspapers, is in some degree exemplified by the following return showing the total number of letters and newspapers passing through the General Post Office, distinguishing ship from inland, during the years 1844, 1845, 1846, and 1847:—

—	1844.	1845.	1846.	1847
Number of Post-offices . .	11	13	17	25
Letters:—				
Ship	26,941	31,277	39,233	49,312
Inland	9,384	11,052	14,136	31,638
Newspapers:—				
Ship	50,389	59,411	73,012	86,223
Inland	10,626	12,981	22,137	37,679
Total Letters	36,325	42,329	53,369	79,950
" Newspapers	61,015	72,392	95,149	123,912
Income	£752	£946	£1,106	£1,504
Expenditure	£751	£706	£915	£1,269

About one-third of the newspapers under the head of "inland" were received by sea, and are consequently entered twice.

It is stated by Sir H. E. F. Young, the present governor of South Australia, in an interesting despatch to Earl Grey on the state of the province, dated June 8th, 1849, that mails are despatched from the city to Hindmarsh village and to the port six times a-day, the postage being 2d., and the extreme distance eight miles and-a-quarter; the postage to all other places within the colony, thirty-one in number is 4d., and the extreme dis-

tance 233 miles. To the most settled districts the mail is despatched twice a-week; to Guichen Bay, Mount Gambier, Melbourne, and Sydney once a fortnight: and to Port Lincoln, by sea, as opportunities offer. The postage to Melbourne and Sydney is 8*d.*; the overland mail to Sydney is at present but little used by the public. The revenue of the Post-office of South Australia for the year ended 31st March, 1849, was £2,215, which nearly covered the expenditure.

Comparative Return of the Number of Offenders convicted in the Province of South Australia since 1840, the years ending September 30th.—Since 1847, returns imperfect.

In the Supreme Court.	1840.	1841.	1842.	1843.	1844.	1845.	1846.	1847.	1848.	1849.	1850.
FELONIES:—											
Murder	—	1	—	3	—	2	—	1	—	—	—
Stabbing, cutting or shooting with intent to kill	—	—	—	—	1	—	—	1	—	—	—
" " or do some bodily harm	—	—	2	1	1	—	—	—	—	—	—
Manslaughter	—	—	1	—	—	—	—	—	—	—	—
Highway robbery	4	1	—	—	1	—	5	—	—	—	—
Assault, with intent to rob	2	2	—	1	—	—	—	—	—	—	—
Burglary	2	1	—	1	—	—	2	3	—	—	—
Stealing in a dwelling-house	7	3	4	1	—	1	—	—	—	—	—
Burglariously breaking and entering dwelling-house, and stealing therefrom	—	—	—	2	—	—	1	—	—	—	—
Breaking and entering dwelling-house, and stealing therefrom	4	—	1	2	—	—	2	—	—	—	—
Stealing in dwelling-house, and putting the persons therein in bodily fear	4	—	—	—	—	—	—	—	—	—	—
Sheep-stealing	1	—	3	2	1	—	—	2	—	—	—
Horse-stealing	—	1	—	1	—	1	—	1	—	—	—
Cattle-stealing	—	—	4	3	1	—	—	—	—	—	—
Receiving stolen goods	1	1	1	—	2	—	—	—	—	—	—
Larceny	16	20	11	6	15	8	17	16	—	—	—
Larceny and former conviction	—	—	—	3	—	1	—	—	—	—	—
Stealing from the person	—	3	6	1	—	—	1	—	—	—	—
Stealing in a warehouse	1	1	1	—	—	—	—	—	—	—	—
Forgery	1	—	1	—	—	—	1	—	—	—	—
Uttering forged notes, orders, &c., with intent to defraud	—	—	—	1	—	1	2	—	—	—	—
Counterfeiting coin	—	—	—	—	7	—	—	—	—	—	—
Total felonies	43	34	35	28	29	14	31	24	—	—	—
MISDEMEANOURS:—											
Assault, intent to commit rape	—	1	—	—	—	1	1	—	—	—	—
Fraud	1	—	2	—	1	—	—	—	—	—	—
Assault	3	2	—	1	3	—	1	—	—	—	—
Concealing birth of child	—	—	—	—	—	1	—	—	—	—	—
Total misdemeanours	4	3	2	1	4	2	2	—	—	—	—
Total convictions	47	37	37	29	33	16	33	24	—	—	—

THE LAWS are, as in the other Australian colonies, entirely English, and administered by a supreme court, which sits for civil and criminal business four times a year. There is a judge, an advocate-general, and crown solicitor, a commissioner of insolvency, a sheriff, and an official assignee. The members of the legal profession, who in 1849 had taken out certificates as barristers and solicitors, were in number twenty-four. A resident magistrates' court sits daily at

Adelaide, and there are seventy of her Majesty's justices of the peace in different parts of the province.

CRIME.—It might be supposed from the erection of a gaol at Adelaide, at a cost of about £40,000, that there was a great amount of crime in the province, whereas the very opposite is the fact.

The annexed return extends over several years, and considering the newness of the colony, and its proximity to the large amount of prison population in Tasmania or Van Diemen's island, the number of criminals cannot but be considered small.

The establishment of district or county courts, for the economical and summary recovery of debts under £50, according to the constitution of the "county courts," which are now working so satisfactorily in England, would be a great advantage, if extended to our colonies, and would supersede the necessity of "courts of request."

GOVERNMENT.—The affairs of the province are administered by a lieutenant-governor, usually styled a governor, who is joined in an executive council by the colonial secretary, the advocate-general, and the surveyor-general. The Legislative Council consists of the lieutenant-governor, colonial secretary, attorney-general, register-general, and four private gentlemen of the colony, holding no office under the government, but nominated by the crown under the recommendation of the secretary of state for the colonies. It is proposed to change this form of legislative authority to that of a Legislative Assembly, with one-third the number of members to be nominated by the crown. Of the proposed alteration I have given full details at pages 553 to 558.

The bill for the better administration of the affairs of the Australian colonies has now (19th of June, 1850) passed its second reading in the House of Lords without any material alteration in the provisions of the bill, excepting the withdrawal of the power from the crown of disposing of the waste lands in the colonies (see page 554), and the extension of the franchise by Earl Grey, conformable to the suggestions of leading practical men in both houses of the legislature. The bill may now, therefore, be considered as finally settled, and I deem myself at liberty to offer a remark which I did not feel justified in making in a work of this nature while the subject was pending; considering it my duty to avoid becoming a partizan on so important a question, or endeavouring to influence public opinion on what has not assumed in legislation or in action the character of a fact. With reference, then, to the measure for preserving, at least for the present, the existing form of Legislative Assembly of New South Wales (see p. 556), and for granting to the other Australian colonies a similar legislative body, I think that such procedure, namely, one House of Assembly, partly elected by the people, and partly nominated by the crown, the proportion nominated being one-third of the elected, decidedly preferable to having *two chambers* elected by popular suffrage.

In the committee of the House of Lords on the Australian Colonies' Government Bill (11th of June, 1850), Lord Monteagle moved that there shall be within each of the said colonies of New South Wales and Victoria a Legislative Council and a Representative Assembly; his lordship supported his motion by references to the mischievous

and dangerous effects resulting from a single chamber, and urged that "the only way to avert the evil (of a single and democratic chamber) was by a double chamber, to the upper of which, by the election of persons of greater age, for a longer time, and with a higher qualification, they would impart a stable and conservative character."

Lord Lyttleton, in supporting the proposition of Lord Monteagle, contended that "it was the bounden duty of the mother country to lay down the form of constitution best suited to her colonies;" according, however, to the report in the *Times* of the 12th of June, 1850, his lordship suggested that "the bill might be sent out to the colonies with words providing a double chamber, but leaving it to the colonies to fill up the scheme."

The bishop of Oxford suggested that there should be two chambers—one called the *Upper*, and the other the *Initiative*, but *both elected*; the upper to consist of a *small number* of persons, to be elected by a high franchise, and to be older men than the members of the Initiative: further, that they should sit for nine, instead of three years; and that only one-third of the members of the upper chamber should retire at a time. His lordship thought that a chamber thus constituted would be in "favour of things as they were," and thus act as a check on the Initiative chamber, who would "seek to improve by continual innovations;" and that the conflict and collision which was inevitable in every self-governing country, especially in those inhabited by our own blood and race, would be mitigated in its evil consequences.*

These propositions are at variance with the principles of monarchical government: they are perfectly in unison with the republican constitution of the United States, and might be supposed to emanate from the senate at Washington, rather than from the house of Lords in London. The congress of the United States of North America is a practical proof that *two elected* chambers are no security against the acknowledged evils of democracy, however different may be the qualifications of the electors or of the elected; and the sagacity of General Washington enabled him clearly to foresee, that a plutocracy, or domination of wealth, would in time become an all-pervading influence in the republic which he was unavoidably

* Debate in the House of Lords, 10th June, 1850. —*Times*.

compelled to adopt. A plutocracy is the great bane of colonial society; there being no object of attainment for human ambition, energy, or patriotism, the mere accumulation of riches becomes the sole spring for action, and men lose those ennobling influences which help to form the character, and guide the conduct of those who live under the eye of a sovereign, and desire the honorary or hereditary distinctions which the crown alone can bestow.

It is with deference, and, I may add, with diffidence, that I venture to offer an opinion adverse to the propositions put forth by several distinguished members of both houses for two elective chambers in the Australian colonies; but my colonial experience teaches, that to leave the representative of the crown in the distant parts of this empire without any gradation of rank between himself and the representatives elected by the people—without any breakwater between the surge of popular opinion and the undoubted prerogatives of sovereign power—must inevitably lead, and that at no distant date, to the formation of a republic, and a separation from monarchical England.

If, therefore, her Majesty's ministers did not deem that there were the materials in Australia for creating two chambers, in ac-

* Since the foregoing was written, Sydney papers have been received from New South Wales, to the date of 21st February, 1850, containing a memorial which is said to embody the wishes of the greater part of the colonists, who pray that all classes of the community may be fairly represented in the proposed new constitution, which, they hope, will resemble the British constitution as closely as the circumstances of the colony will allow; they pray to be "protected against rash and hasty legislation by the interposition of a second chamber, and that this step in the progress of constitutional government be no longer deferred." The constitution which the colonists seek is, the vesting of their government in three estates—(1.) a governor appointed by the crown; (2.) a Legislative Council, consisting of members nominated by the crown, together with *ex-officio* members of the executive, in the proportion of one *ex-officio* to four non-official members; (3.) a House of Assembly elected by the colonists. This is substantially the plan recommended in my *Colonial Policy*, published in 1837, for colonies when ripe for constitutional government; it is one for which New South Wales is now prepared, and which the colonists seek to obtain.

In the Legislative Council of South Australia, the Honourable John Morphet, an intelligent, respectable, and influential member of the local legislature (see Despatch from Sir H. E. F. Young to Earl Grey, dated Adelaide, 16th November, 1848), proposed—"That, in the opinion of this council, the form of the legislature should, as nearly as possible, resemble that of the mother-country, consisting of a governor and two chambers, one in the nature of

cordance with the principles of the British constitution, they had no alternative but the maintenance of the legislative system introduced by Lord Stanley, in 1842; and Earl Grey truly urged that the Legislative Council of New South Wales had "acted with more judgment, discretion, and regard to the public interests, than was usual with colonial governments;" that it stood "very high among colonial administrations, and was, on the whole, well adapted to the condition of the people." (June 10, 1850).

Time and circumstances will eventually necessitate the formation of legislatures in our southern colonies similar to those which have existed for so many years in British America and in the West India islands; for this change the bill now sanctioned by the house of Commons and the house of Lords provides; and when that necessity arises, her Majesty's ministers and the Imperial Parliament can more effectually deal with the question than probably could be satisfactorily done at the present moment.*

Lieutenant-Governors of South Australia according to the dates of their being proclaimed in the colony.

Captain Hindmarsh, R.N.	Dec. 28th, 1836.
Lieutenant-Colonel Gawler	Oct. 12th, 1838.
Captain Grey	May 10th, 1841.
Major Robe	Oct. 25th, 1845.
Sir H. E. F. Young	Aug. 2nd, 1848.

an upper chamber, to consist of hereditary members, nominated by her Majesty the Queen, and which members of the upper chamber, in order to secure identity of interest with the colony, should possess a certain landed qualification, free and unencumbered. And, further, in order to secure a permanence of that identity of interest, it is desirable that each inheriting member should possess, and prove the possession of, an equal landed qualification to his predecessor.—That, in the opinion of this council, the second chamber should consist of members elected by the people.—That all bills passing the two chambers, and receiving the assent of the governor, should at once become law.—That in the opinion of this council, an executive council should be given to the governor, consisting of two officials, having seats in one or other of the chambers, and two members of each of the chambers, all to be nominated by the governor. That such members of the executive should continue in office so long as the government could command majorities in both chambers upon questions introduced to the chambers by the governor, and so long as they retained seats in the respective chambers of which they were members. That such members of the executive should receive certain fixed emoluments. That in order to secure the irresponsibility of the governor, who would be a third branch of the legislature and the representative of sovereignty, the members of the executive council should be responsible, and should go out of office as before provided, and upon a vote of want of confidence, passed after due notice being given of its introduction, by the chamber of representatives."

CHAPTER IV.

FINANCIAL STATE, REVENUE, LAND SALES, CUSTOMS' DUTIES, AND EXPENDITURE—
BANKING INSTITUTIONS—COMMERCE, IMPORTS, EXPORTS, AND SHIPPING—STAPLE
PRODUCTS—MINES AND MINERALS—AGRICULTURE—LIVE STOCK—PUBLIC COMPANIES
AND SOCIETIES—RATES OF WAGES—PRICES OF PROVISIONS—FIELD FOR
EMIGRATION.

THE first chapter of this book on the history of South Australia, shews the improvident expenditure and consequent financial embarrassment, caused by the proceedings of Governor Gawler.

To save the province from ruin, the aid of the Imperial Parliament, as before stated (see page 645), became absolutely necessary, and in the year 1841, £102,649 were advanced to meet Governor Gawler's drafts on the colonization commissioners, and £52,350 to defray other expenses; in 1842, £27,290 was voted to meet Governor Gawler's drafts, and £32,646 to meet Governor Grey's; in the course of the three following years, £10,446 were advanced to meet Governor Grey's, making a total of £225,382, which, though at first voted as a loan, was subsequently confirmed as a grant. There has been, I believe, much discussion as to the amount of aid afforded by Parliament, but the above statement is given on the authority of a document recently sent home by the governor of South Australia. Notwithstanding, however, the large sums thus granted, the provincial government remains

burdened with a bond debt of £85,000, of which the interest is being paid by the colonists from the land revenue.

The colonists claim from the Imperial Treasury a sum of about £82,000 on the grounds of money to that amount having been abstracted from the land fund, and applied by the colonization commissioners during the difficulties of the colony to governmental purposes, notwithstanding the pledge given to all purchasers of land previous to the year 1841, that the produce of the land sales should be devoted solely to the furtherance of emigration. This demand the British government consider unreasonable; the common sense of the matter appears to me, that the sum in question having been borrowed from the emigration fund in aid of the local revenues, should be repaid from the same source for which it was borrowed—that is, whenever the fixed and incidental revenue exceeds the wants of the local government, a portion should be set aside for the repayment of the money borrowed. Annexed is a comparative return of the net ordinary revenue during the last six years:—

Details of Fixed Revenue.	1844.	1845.	1846.	1847.	1848.	1849.
Customs (including pilotage and tonnage dues)	£20,124	£25,590	£37,643	£48,742	£55,439	£73,900
Postage	752	946	1,108	1,504	1,954	2,000
Fees—Public Offices	1,689	2,207	2,561	3,533	5,366	4,500
Fines—Law Courts	274	347	175	237		
Licences	2,156	2,409	2,941	3,733	4,593	5,420
Auction duty	563	570	546	1,458	1,521	2,000
Assessment on live stock	1,486	2,191	1,341	4,860	3,175	4,000
Permits	44	52	47	—	—	—
Storage of gunpowder	24	65	155	174	129	200
Tolls	—	—	280	254	—	—
City rates	—	—	70	1,181	1,318	700
Total fixed revenue	27,116	34,381	46,871	65,679	73,495	92,700
Incidental	761	1,800	1,146	1,348	9,352	1,480
Total revenue	27,877	36,182	48,017	67,027	82,847	94,200
Deduct the revenue from each preceding year	—	27,877	36,182	48,017	67,027	82,847
Increase on each year	—	8,305	11,835	19,010	15,820	11,353

Note.—The circumstance of a large proportion of the assessments on live stock due for 1846 not having been collected until 1847, accounts for the apparent decrease in this branch of the revenue in the former year, and its increase in the latter. The revenue for 1849 is an estimate for the year ending 31st March, 1850, as laid before the Legislative Council at Adelaide, in the session of 1849–50.

It will be observed that since 1844, there has been a steady annual augmentation of the revenue. The increase during the year 1847 over that of 1846 is thus noted by Lieutenant-governor Robe:—

Duties of Customs on Imports.—On spirits, an increase of 23 per cent.; on tobacco, 24; on wines, 98; on other goods, 36; on other customs' receipts, 67; on the general receipts of customs, 29.

The other sources of revenue show a corresponding increase in 1847:—Postages, 36 per cent.; fees of offices, 38; of which the registry fees, 44; fines, 36; licences, 27; auction duty, 166; and on the gross revenue, 39.

The auction duty increased very largely, which is attributed by the lieutenant-governor to the admission of goods to free warehousing, under the Ordinance No. 16, of 1846.

The annexed statement gives in detail the income of 1847 and 1848:—

Details of Income.	1847.	1848.
CUSTOMS:—		
Spirits imported	£18,378	£22,714
Wines	2,806	3,119
Tobacco	7,448	8,890
Other goods	19,118	20,094
Warehouse rents	990	222
Incidental receipts	—	57
	50,634	55,098
Less drawback repayments	1,892	596
Total	48,742	54,501
MISCELLANEOUS:—		
Postage of letters	1,504	1,954
Fines and fees	3,771	5,366
Licences (Publicans)	3,527	4,350
" (other)	206	243
Assessment on stock	4,860	3,175
Auction duty	1,458	1,521
Storage of gunpowder	174	129
Tolls	254	—
City rates	1,181	1,318
Pilotage and harbour dues	—	938
Total	16,735	17,994
INCIDENTAL:—		
Rents of government property	691	976
Sales of	123	307
Surcharges recovered	26	1
Repayments	299	1,160
Miscellaneous	207	6,969
Total	1,346	9,413
LAND FUND:—		
Proceeds of sales of waste lands	—	33,748
Licences, occupation	—	1,570
" timber	—	660
Rents of aboriginal reserves	—	28
Immigration department	—	76
Repayments	—	30
Total	—	36,112
General total of receipts	—	119,023

Note.—No returns in Blue Book of land fund for 1847.

The customs duties form the largest item of revenue. Until the 6th of July, 1849, there was a differential tariff in South Australia, but under the authority of the Imperial Legislature the colonial Legislative Council from the above date adopted an uniform tariff on the importation of the goods and produce of all countries alike. The duties levied on the principal articles are—manufactures of cotton, silk, wool, and linen, *five per cent. ad valorem*; also on arms, apparel, baskets, boats, brass manufactures, brooms and brushes, clocks and watches, copper manufactures, cutlery, earthenware, furniture, gloves, grindery, hair manufactures, iron manufactures unenumerated, implements and tools, lead manufactures, machinery, matting, musical instruments, netting, paper stained and hangings, perfumery, pewter ware, pictures, pipes not of common clay, plate and plated goods, saddlery and harness, stationery, tin ware, *five per cent. ad valorem*. On all other articles the duties are as follows:—

Alkali, 6d. per cwt.; annatto, 3s.; arrowroot, 3s.; bacon and ham, 2s. 6d.; bags and sacks—corn, 5s. per 100; ore, gunny and returned, 6s. 6d.; bales for wool, 2d. each; beef and pork, 1s. 6d. per cwt.; beer, porter, ale, cider, and perry, 3d. per gallon; liquid blacking, 4d. per gallon; paste blacking, 1d. per lb.; printed books, 6s. per cwt.; barrows and trucks, 1s. each; boots, 6s. per dozen pairs; half boots, 3s.; shoes, 2s.; children's, 1s.; bread and biscuit, 7d. per cwt.; glass and stone bottles, 1d. per dozen; fire and bath bricks, 5s. per 1,000; other bricks, 2s.; brimstone, 6d. per cwt.; butter, 3s.; chain cables, 1s. 6d.; tallow candles, 3s.; wax, composition, sperm, &c., 6s.; canvass, 2s. per bolt; carts and drays, 10s. each; wheeled waggons and timber carriages, 20s.; carriages, 5 per cent. ad valorem; empty casks, 2s. per tun; cement, 4d. per cwt.; chalk, 1s. 6d. per ton; cheese, 3s. per cwt.; chocolate and cocoa, 1d. per lb.; coals, 9d. per ton; coke, 2s.; coffee, 4s. per cwt.; confectionary, 2d. per lb.; copper, sheathing and nails, 5s. per cwt.; cordage and rope, viz., Europe, 2s. per cwt.; Manilla, 1s. 6d.; Coir and Jute, 9d.; unenumerated, 1s. 6d.; small cord and twine, 5s. per cwt.; cork, 2s.; corks, 1d. per gross; corn, meal, and flour, viz., wheat, 1s. 6d. per quarter; barley, 1s. 3d.; oats, 1s. 3d.; maize and millet, 1s.; peas, beans, and pulse, 1s. 6d.; malt, 3s.; flour and meal, 1s. per 100 lbs.; bran and pollard, 3d. do; cutlery, 5 per cent. ad valorem; drapery, ditto; drugs—corrosive sublimate, 2d. per lb.; spirits of tar, 1d. per gallon; vitriol, 1d.; unenumerated drugs, 5 per cent. ad valorem; other unenumerated and manufactures, ditto; bed feathers, 1d. per lb.; dry and pickled fish, 1s. per cwt.; flax, 1s.; dried fruits of all sorts, 2s.; in bottles, 6d. per dozen quarts; preserved in sugar, succades, and jams of all sorts, 1d. per lb.; fresh, 6d. per bushel; plate glass, in squares exceeding 600 inches, 4d. per lb.; not exceeding 600 inches, 3d.; crown and sheet, in squares exceeding 200 inches, 2s. per 100 feet; not exceeding 200 inches, 1s. 6d.; flint glass, cut, cast, mirrors, and manufactures, 5 per cent. ad valorem; glue, 1s. 6d. per cwt.; grease 1s.; sport-

ing gunpowder, in canisters, 5s. per cwt.; blasting, 2s. 3d.; groceries, 5 per cent. ad valorem; haberdashery and millinery, ditto; hosiery, ditto; curled hair for upholsterers' use, 1d. per lb.; hats and caps, 5 per cent. ad valorem; hay, 2s. per ton; dressed hemp, 1s. 6d. per cwt.; undressed tow and oakum, 1s.; dressed hides, 3s.; raw, salt, and dried, 1s.; honey, 4s.; hops, 2d. per lb.; writing ink, 3d. per gallon; printing ink, 1d. per lb.; iron, viz., bar and rod, 10s. per ton; sheet and hoop, 14s.; pig, 5s.; sledges, anchors, anvils, plates, cart-arm moulds, and articles of wrought iron, heavy and in the rough, 1s. per cwt.; cart-arms and boxes, finished—chain, articles of wrought iron, finished, 1s. 6d.; camp ovens, pots, boilers, and castings, 10d.; refined isinglass, 6d. per lb.; common for manufacture, 2d.; implements and tools, 5 per cent. ad valorem; jewellery, ditto; old junk, 1s. per cwt.; lard, 2s. 6d.; lead, viz., pig, sheet, and shot, 1s. per cwt.; leather, sole, 3s. per cwt.; kip and harness, 6s.; calf, 1d. per lb.; patent bazils, 5s. per dozen; kangaroo, 1s.; hogskin, 1s. each; bazils, 6d. per dozen; enamel, 3s. 6d. per hide; lime and lemon juice, and syrup of all sorts, 3d. per gallon; lucifers, 4d. per gross of boxes; macaroni and vermicelli, 1d. per lb.; mats and matting, 5 per cent. ad valorem; musical instruments, ditto; mustard, 1d. per lb.; needles, 3d. per 1,000; nuts, viz., almonds, walnuts, chesnuts, filberts, and small nuts, 2s. per cwt.; shelled almonds, 4s.; cocoa, 6d. per 100; oil, black, 1d. per gallon; sperm, head-matter, and other fish or animal oil, 3d.; linseed, rape, hemp, and cocoa-nut, 2d.; olive, castor, and other vegetable oils, 6d.; oilman's stores, 5 per cent. ad valorem; onions, 1s. per cwt.; paints, 1s.; painters' colours, and whiting, 6d.; brown paper, wrapping, and blotting, 3s. per cwt.; printing and cartridge, 5s.; writing, 1d. per lb.; other unenumerated manufactures, 5 per cent. ad valorem; parchment, 3s. per roll; percussion caps, 2d. per 1,000; pickles and fruit preserved in salt, 4d. per gallon; tobacco pipes, of common clay, 1d. per gross; pitch, 1s. per barrel; potatoes, 3s. per ton; provisions and preserved meats, 3s. per cwt.; pins, 1d. per lb.; rice, 9d. per cwt.; rosin, 6d. per barrel; sago, 1s. per cwt.; salt, 3s. per ton; saltpetre, 1s. 6d. per cwt.; skins for tanning, 4d. per doz.; soap, 1s. per cwt.; spices, viz., cassia, 3s. per cwt.; cinnamon, 2d. per lb.; cloves, 1d.; mace, 2d.; nutmegs, 2d.; ginger, 2s. per cwt.; pepper, 1s. 6d. other spices, 5 per cent. ad valorem; spirits or strong waters of all sorts, viz., for every gallon of such spirits or strong waters of any strength not exceeding the strength of proof by Syke's hydrometer, and so in proportion for any greater or less strength than the strength of proof, and for any greater or less quantity than a gallon; also, perfumed spirits not being sweetened or mixed with any article so that the degree of strength thereof cannot be exactly ascertained by such hydrometer, 10s. per gallon; spirits, cordials, or strong waters, sweetened or mixed with any article so that the degree of strength thereof cannot be exactly ascertained by Syke's hydrometer, 10s.; starch, 2s. per cwt.; steel, 2s.; stones—millstones, 2s. per foot diameter; grindstones, 1d.; roofing slates, 3s. 6d. per 1,000; slabs and flagstones, 1s. per 100 feet superficial; tomb and wrought stones, 1d. per foot ditto; marble, wrought, 6d. ditto; bluestone, 5s. per cwt.; refined and candy sugar, 4s. per cwt.; muscovado, 2s.; molasses, 2s.; tapioca, 2s.; tallow, 2s.; tar, 1s. per barrel; tea, 2d. per lb.; tin plates, 2s. per box; tobacco, manufactured, 2s. per lb.; unmanufactured, 1s.; cigars and cheroots, 5s.; snuff, 2s.; boiled down in

bond for sheepwash, 1d.; toys, 5 per cent. ad valorem; turnery and woodenware, ditto; spirit of turpentine, 2d. per gallon; vinegar, 1d.; whalebone, 14s. per cwt.; wine, 1s. per gallon; wood, viz., posts and rails, hand spikes, and poles, 1s. 6d. per 100; paling, 6d.; shingles and laths, 6d. per 1,000; trenails and spokes, 2d. per 100; oars, 2s. per 100 feet; square timber, and balks, spars, deals, battens, quartering, planks, boards, and sawn, hewn, or split timber of all kinds, not otherwise particularly enumerated or described, 2s. 6d. per 40 cubic feet; manufactures of wood, 5 per cent. ad valorem; zinc, and manufactures of ditto, ditto.

Unenumerated articles, raw and manufactured, 5 per cent. ad valorem.

Animals, living; baggage of passengers; bottles imported full; bullion and coin; plants and trees; seeds and roots, garden; specimens illustrative of natural history, and wool unmanufactured are imported free.

CUSTOMS' STORAGE.—Ample accommodation is provided by the government at this port for the storage of goods in bond, for which the following are the weekly rates of storage:—For every pipe or puncheon, 1s.; hoghead or half-pipe, 6d.; barrel or quarter-cask, 3d.; tierce, 4d.; six-dozen bottle cases, 6d.; three-dozen ditto, 3d. Any less or greater quantity to be charged in proportion to the above scale.

The powder magazine is situated on La Fevre's Peninsula, opposite Port Adelaide, where powder is stored at the following rates:—For each barrel containing 50 lbs., for not more than six weeks, 1s.; above six weeks, per week, 2d.; containing less than 50 lbs., for not more than six weeks, 6d.; above six weeks, per week, 1½d.

Rates of Pilotage.—For every vessel taking a pilot, £2; and in addition for every foot of draft of water above nine feet, 10s.; vessels employing the steam tug have one-fourth of their pilotage remitted. **Harbour Services.**—Mooring, unmooring, and removing vessels above 70 and under 100 tons, 10s.; if 100 tons register, 15s.; and for every 20 tons above 100 tons, 1s. In addition to the above, 1s. per hour for each man in the harbour department employed in the above service. The charges for the use of the steam tug for towing in or out of harbour any vessel of 200 tons register or less, £5; and for every ton over 200 tons, 6s.

Dues on entry and clearance, wharfage and pilotage, were abolished in 1845. The storage charges at Port Adelaide are for every pipe or puncheon, weekly, 1s.; hoghead or half-pipe, 6d.; barrel or quarter cask, 3d.; tierce, 4d.; six dozen bottle case, 6d.; three dozen ditto, 6d.

All her Majesty's vessels of war, hired transports, merchant ships freighted wholly or in part by government, vessels of the royal yacht squadron, and ships of war belonging to friendly nations, are exempt from all pilotage, dues, &c.

"City rates," or assessments on houses, were raised in 1847 from six to twelve-pence

in the pound; the whole of such rates are expended upon the streets of Adelaide. Licences to publicans yield no inconsiderable revenue, as will be seen by the subjoined:—

Number of Publicans' Licences granted in South Australia from 1844 to 1847, inclusive.

Year.	Publicans' General Licences.		Wine and Beer Licences.		Storekeepers' Licences.		Total.
	No.	Amount.	No.	Amount.	No.	Amount.	
1844	63	£1,575	7	£84	5	£25	£1,684
1845	73	1,825	12	144	5	25	1,994
1846	106	2,550	13	156	6	30	2,836
1847	135	3,375	6	72	9	45	3,492

Comparative Number of Public Houses in the Province of S. Australia from 1844 to 1847 inclusive.

Locality.	1844.	1845.	1846.	1847.
Adelaide	34	41	54	61
Port Adelaide and Albert Town	3	4	4	6
Country, including P. Lincoln	33	40	50	55
Total	70	85	118	132

The annexed table shows the quantity of land sold, the price per acre, and the income:

Year.	Quantity of land sold, in acres.	Average price per acre.	Total amount of Purchase-money.		Proportion received in each year.
			Paid in Eng-land.	Paid in S. Aus-tralia.	
1835	58,995	£0 12 0	£35,397	—	£35,397
1836	1,680	0 12 0	1,248	—	1,248
	240	1 0 0	—	—	—
1837	591	6 1 0	3,120	3,594	6,714
	3,120	1 0 0	—	—	—
1838	48,040	1 0 0	37,960	10,080	48,040
1839	170,841	1 0 0	48,336	122,505	170,841
1840	15,565½	1 0 0	7,040	8,525	15,565
1841	1	0 12 0	320	7,331	7,651
	7,650½	1 0 0	—	—	—
1842	17,081½	1 0 0	—	17,001	17,081
1843	598	1 0 0	—	613	613
1844	1,496*	2 6 4	100	5,566	5,666
	1,932†	1 2 8	—	—	—
1845	5,675*	1 11 3	—	52,902	52,902
	43,983†	1 0 0	—	—	—
1846	11,193*	4 9 8	21,720	76,874	98,594
	48,209†	1 0 0	—	—	—
1847	16,911*	1 2 7	908	35,428	36,336
	18,092†	1 0 0	—	—	—
1848	29,200	1 1 9	—	—	36,112
1849	—	—	—	—	—
1850	—	—	—	—	—

Note.—325,464½ acres were sold at fixed prices, and 2,367 acres disposed of by public auction up to the year 1844; 3,463 acres have been reserved for the aborigines. The acres marked thus (*) were sold by public auction, and those marked thus (†) at fixed prices.

It will be observed, that in 1843 the sales of land had diminished to 598 acres; and even that small quantity would not have been sold at 20s. an acre, but that some of it contained minerals, which in that year were discovered in South Australia. The subsequent sales have been chiefly owing to this fortunate addition to the natural resources of the colony. It is understood

that the colonists of South Australia are generally favourable to the maintenance of the system of public sales at a minimum price of 20s. per acre. This, considering the mineral value of the lands, and that most of the purchases have been made on this principle, is not unreasonable. But it seems to be forgotten that the minimum price at public auction of a commodity in demand is of comparatively little consequence, for, in this case it may be said with Hudibras,

"The value of a thing
Is just as much as it will bring."

If limited quantities of surveyed lands were annually offered to public competition, at a price, say, of 5s. per acre, due notice being given of such sales in England and in Australia, and accurate surveys on an extended scale deposited in a crown-land colonial office in London, as well as in the colony; whatever the land was actually or prospectively worth would be bid for it, irrespective of a minimum upset price.

During the debate on the Australian colonies bill in the House of Lords, Lord Lyt-leton proposed that the power of repealing all or any part of the 5 & 6 and 9 & 10 of Vic., regulating the sale of waste lands in the Australian colonies, should be given to the governors in council of New South Wales, Victoria, Van Diemen's Land, and South Australia; and that they might make further or other provisions for the management of the said waste lands, and the appropriation of the sums derived from such sales. His lordship ably and rightly contended that it was altogether inexpedient longer to maintain the existing price of £1 per acre in these colonies, especially in New South Wales and Victoria; and he referred to the report from the Legislative Council of New South Wales on the subject (see p. 428). That the local legislatures would reduce the price of land he had no doubt; but he did not imagine they would be disposed to alter any of the other principles of the existing land sales; they would maintain the division of the land fund in two parts, applying the one to local improvements, the other to emigration. If the local governments did not thus act, the Imperial Legislature might refuse their assent to any deviation from that principle. As to those who had purchased land on the understanding that the *minimum* price of £1 per acre was not to be reduced, he had no doubt but the local legislatures would act rightly in regard to them; but

these vested individual interests were, in New South Wales and Victoria, exceedingly few in number, as the land sales at this price were very limited.*

Earl Grey, however, in the same debate, (12th June, 1850), truly observed, that the "crown lands in the colonies were domains held by the sovereign as trustee, for the benefit of all the subjects of the realm," and that "the interests of the people of England were to be considered on this question." The subject is one of great importance to all classes; and other occasions will occur for its further examination.

At the beginning of the year 1849, the land alienated by the crown in South Australia amounted to 499,283 acres; there were then surveyed and unsold county lands, 82,287 acres, and 16,902 acres surveyed and unsold mineral lands open for purchase, at the upset price of 20*s.* per acre, without competition, as they had been previously offered for sale, and remained unsold. The lands surveyed, but not yet sold, comprise

320,168 acres, and, under the existing regulations, cannot be sold for less than twenty shillings per acre. The unsurveyed land is computed at two million acres. How much of it is available for tillage or for pasturage it is impossible to say; but even at five shillings per acre, there is a considerable revenue still to be obtained by the crown from this source. The average cost of the surveys in South Australia, during the year 1848, was about fourteenpence-halfpenny per acre, including everything but office-rent.

EXPENDITURE.—In 1840, when the colony was just formed, the expenditure was £169,966; but this ruinous extravagance was checked, as we have seen, by dishonouring the drafts of the governor, and by the recal of Colonel Gawler. As soon as practicable, his successor, Captain Grey, reduced the expenditure to reasonable limits; and, in 1844, it was within £30,000: the subsequent annual disbursements have, in each year, been less than the revenue. The progressive increase is thus shown:—

Expenditure.	1844.	1845.	1846.	1847.	1848.	1849.
Civil establishment	£17,293	£17,507	£18,303	£22,262	£25,449	£39,997
Contingent expenditure	2,017	3,133	4,001	6,722	10,407	2,640
Judicial establishment	3,636	3,421	3,637	4,126	4,331	5,707
Contingent expenditure	258	245	468	1,087	1,322	250
Ecclesiastical establishment.	214	350	350	350	350	350
Contingent expenditure	—	—	777	1,892	—	—
Public buildings and works	509	2,728	3,896	15,646	28,888	20,034
Miscellaneous	5,523	4,711	5,772	6,891	9,382	11,333
Total	29,450	32,099	37,207	58,976	80,129	80,311
Deduct expenditure of previous years	—	29,450	32,099	37,207	58,976	—
Increase on each year.	—	2,649	5,108	21,769	21,153	—

Note.—The great increase of expenditure during the year 1847 was occasioned by the number of public works—bridges, buildings, &c., completed, or which were in course of completion, during that year. In addition to the above annual expenditure, the following repayments have been made from the Colonial Revenue on account of debts incurred by the local government prior to the year 1844, viz., to her Majesty's Treasury, the sum of £1,274 15*s.* 4*d.*, paid in 1844 in liquidation of claims incurred in the year 1841; to the Land Fund, £984 11*s.* 2*d.* in the year 1844; £1,800 in the year 1845; £9,000 in the year 1846; and £7,820 2*s.* 9*d.* in the year 1847. 1849 is an estimate only.

An abstract of the expenditure estimate for the year ending 31st March, 1850, will prove the resources which a body of Englishmen can develop within a very brief period, when located in a country favourable for their habitation, unfettered in their energies and industry. All the following salaries are paid from the taxes, voted and collected annually by themselves:—

Governor, £1,500; private secretary and establishment, £424; legislative and executive councils, £424; colonial secretary (£700) department, £1,844; treasurer (£500) department, £1,060; registry, £430; audit,

£830; customs, £2,749; crown lands, £1,326; survey, £3,309; colonial engineers, £1,845; royal sappers and miners, £823; post-office, £3,342; harbour, £4,327; colonial store-keeper, £200; superintendent of cemetery, £50; out-stations, £1,445; police, £11,756; aborigines, £1,991; medical, £1,082; lunatic asylum, £579; supreme court (judge, £1,000) £1,992; insolvent court, £300; resident magistrates' court, £780; bench of magistrates, £150; sheriff's department, £1,565; advocate-general, £700; coroner, £220; colonial chaplain, £350. These sums are irrespective of £2,890, supplementary votes, about £30,000 for public works, and

* *Times*, 12th June 1850.

nearly £12,000 for miscellaneous expenditure.

A moiety of the money arising from the sales of crown lands is applied to immigration; the other moiety, styled the crown reserved moiety, is applicable to the survey, crown lands, and aborigines departments. Out of this moiety £15,000 was paid in 1848 and 1849, on account of the year 1848, towards the extinction of the colonial bonded debt, of which the interest, at five per cent., is paid yearly, out of the general colonial revenue.

The estimated expenditure of the land fund of South Australia, from April to December, 1849, was as follows:—

Amount of relief to the General Revenue to be charged to the Land-Fund	£7,971
For immigration	17,714
For public works	3,355
Towards extinction of the bonded debt of £84,000	17,950
For roads and bridges	7,659
For sundry small items	783
	£55,433
Which will be covered by an estimated revenue from lands sold	27,000
From licences and rents	1,875
Balance in hand	26,558
	£55,433

Greatly to the credit of the colonists, they have contributed liberally to the promotion of public works and improvements; under this head, the sums voted were, in 1846, £3,616; in 1847, £14,847; and in 1848, £28,789; and the estimated sum for the year ending 31st March, 1850, is upwards of £30,000. The cost of the Supreme Court-house is £6,000; the government-house, hospital, jail, police office, Resident Magistrates' court, and slaughter-house, would be creditable to any city in England. The expenditure from the British treasury for troops, or what is termed "military protection," was, in 1843, *nil.*; 1844, £4,000; in 1845, £3,700; in 1846, £3,750; in 1847, £4,000. The total cost for pay of troops and commissariat expenses for five years ending 31st March, 1847, was £15,890. There is a militia consisting of two troops of cavalry and one company of infantry, but it has not been called out since 1840, and there is no expense attending the force.

BANKING ESTABLISHMENTS.—South Australia has its own public bank, which is coeval with the foundation of the colony;

there is also a branch of the *Austral-Asian*, and, recently, one of the *Union Bank of Australia*, has been placed at Adelaide. The *South Australian Bank* appears to be a well-conducted chartered company; it has a subscribed capital of £200,000, in shares of £25 each; upwards of £180,000 have been paid up. By the charter, there is a power of augmenting the capital to £500,000. The corporation is managed by a court of directors in London, and there is a local board of three directors at Adelaide, aided by a manager. The net profits of the bank at Adelaide and in London, for the year 1849–50, was £15,153; the dividend paid to the proprietors for the year, was six per cent. free of income-tax.

The bank averages for South Australia are thus stated since 1843:—

<i>Liabilities.</i>					
Year.	Notes in circulation.	Bills in circulation.	Deposits.	Balance due to other banks	Total.
1843	£9,939	£3,314	£51,897	£793	£65,944
1844	11,027	1,890	55,348	787	69,054
1845	14,912	3,714	66,513	340	85,480
1846	23,224	5,008	91,848	1,451	121,532
1847	32,008	4,793	102,636	1,739	141,178
1848	40,937	5,826	118,563	241	165,568
1849	—	—	—	—	—
1850	—	—	—	—	—

<i>Assets.</i>					
Year.	Coin.	Landed property.	Balances due from other banks.	Notes and bills discounted and all debts due to the banks	Total.
1843	£27,881	£8,139	£2,944	£186,067	£225,032
1844	32,492	7,867	3,055	181,121	224,537
1845	30,314	7,590	3,495	174,971	216,376
1846	69,238	7,226	2,707	196,480	275,652
1847	101,868	7,382	9,280	309,097	409,646
1848	88,620	10,440	7,194	367,765	474,021
1849	—	—	—	—	—
1850	—	—	—	—	—

The Coins in circulation are the gold, silver, and copper coins of Great Britain, which bear the same current value as in the United Kingdom.

On 31st December, 1848, the coin in the colony was estimated at £125,247; viz. in the Bank of South Australia, £57,573; Bank of Austral-Asia, 25,674; in treasury chest, £32,000; in circulation, £10,000. The weekly average amount of bank-notes in circulation is £48,371.

The course of exchange on London from

1st January to 23rd October, 1848, was two per cent. premium; from 23rd October to 31st December, 1848, four per cent. *On the colonies*, 1st January to 23rd June, two per cent. premium; from 23rd June to 31st December, one per cent., by the Bank of Austral-Asia; and by the Bank of South Australia, for same periods, three to two per cent. premium.

Weights and Measures as in England.

There is a well-managed *Savings' Bank* at Adelaide, which possesses the confidence of the public.

COMMERCE.—The rapid establishment of settled and profitable commercial intercourse

between South Australia and England, affords a good proof of the value which the merchants, manufacturers, and shipping interest derive from the foundation of colonies where Englishmen can produce those articles which are in demand in the United Kingdom, and receive in exchange British manufactures. South Australia, that but a few years ago was a wilderness, has now a maritime trade in value little short of a million sterling.*

The following shows the imports and exports since 1839, shortly after the formation of the settlement, the years ending January :—

Year.	Imports from					Exports to				
	Great Britain.	British Colonies.	Foreign Countries.	Total.	Imports consumed in colony.	Great Britain.	British Colonies.	Foreign Countries.	Total.	Imports re-exported.
1839	£123,308	£200,325	£23,016	£346,649	—	£9,524	£6,515	—	£16,039	—
1840	151,026	124,874	27,420	303,320	—	15,699	16,380	—	32,079	—
1841	161,480	123,192	3,676	288,348	—	53,798	50,263	£589	104,650	—
1842	93,382	69,403	6,627	169,412	—	39,628	35,375	245	75,248	—
1843	58,479	47,024	3,595	109,098	—	53,987	26,138	730	80,855	—
1844	63,610	54,366	854	118,830	£105,993	64,787	28,451	2,020	95,258	£12,921
1845	103,797	75,848	5,174	184,819	168,160	97,600	41,075	9,783	148,459	16,658
1846	174,689	141,661	13,748	330,099	303,321	218,095	92,340	2,402	312,838	25,778
1847	235,374	166,475	8,975	410,285	335,692	166,080	170,360	13,907	350,348	75,133
1848										
1849	177,428	196,236	10,662	384,326	346,130	334,977	167,215	1,875	504,068	38,208

Note.—The foregoing returns cannot be carried back beyond the year 1839, as the colonial records from which they have been compiled do not embrace any earlier year.

The shipping outwards, from the years ending January, 1848 and 1849, according to the Blue Books, was :—

Year.	Great Britain.		British Colonies.		Foreign States.		Total.		
	Number.	Tons.	Number.	Tons.	Number.	Tons.	Number.	Tons.	Men.
1848	30	10,940	152	28,275	15	5,101	197	44,316	2,575
1849	16	5,572	125	22,156	10	3,152	151	30,880	1,795

According to a return in the *South Australian Almanack* for 1849, the number of vessels entering *inwards* for five years, was, from—

Year.	Great Britain.	British Colonies.	Foreign States.	Total.
1844	6	60	2	70
1845	12	97	5	114
1846	20	111	11	142
1847	28	115	7	150
1848	35	170	10	215

Note.—The vessels registered according to law in the colony were, in 1848, 17—tonnage 1,548.

* It may not be irrelevant to mention for the benefit of those seeking information on colonial subjects—that it may be obtained with trustworthy accuracy at Saunders' Colonial Library, Charing Cross, where all the colonial newspapers are filed, the proprietor of that establishment having made the collection of

The value of imports for the year ending 5th April, 1849, was £471,526; of the exports, £485,922. Tonnage, in, for the year ending 5th April, 1849, 59,011 tons; tonnage, out, 53,327 tons. Value of staple produce exported during the year ending 5th April, 1849, £446,643 10s.

STAPLE PRODUCTS.—I have shewn, in a previous page, the quantity of wool exported from South Australia (p. 618.) The quantity shipped from South Australia, for the following years was, in 1845, 1,078,559 lbs.; 1846, 1,473,186; 1847, 1,804,918; 1848, colonial information a primary object. Mr. Henry Capper, formerly senior clerk to her Majesty's emigration commissioners, a gentleman of long experience, and connected with the early emigration to South Australia, has his office for shipping passengers, &c. to the colonies at Saunders' Colonial Library.

2,329,134; 1849, (estimated) 2,500,000. The value of the wool exported is about £120,000, and of tallow, about £5,000. Tallow, which first appeared on the list of staple produce during the year ending 5th July, 1849, amounted to 2,168 cwt. Wheat, flour, barley, maize, and oats, are now becoming staple exports of the province; in 1843, the quantity of wheat and wheaten flour exported, was equivalent to 38,482 bushels; in 1847, to 169,490; and in 1848, wheat and flour were shipped to the value of £40,000. The wheat is of excellent quality; some may be seen at the *South Australian Company's* offices in London, with a larger ear and a longer stalk than any to be found in the United Kingdom. Eight hundred quarters of South Australian wheat were recently received in Mark-lane, weighing 63 to 65 lbs. per bushel, and sold for 53s. per quarter, when the price of English grown corn was much lower.

Leather, whalebone, oil, beef, live animals, gum, bones, dried fruits, and other articles, are now recorded in the export list, and to this list, doubtless, various items will probably be added. The value of the exports from South Australia for the following years was, 1845, £103,981; 1846, £190,669; 1847, £275,171; 1848, £354,907.

According to an official return printed by order of the house of commons, 5th July, 1850 (No. 511), the total imports of South Australia for ten years ending 1848, were valued at £2,643,847; the exports for the same period at £1,719,856: the shipping inwards was, in tons, 236,624. The quantities and values of the two staple products of the colony, wool and minerals, exported, are stated to have been thus:—

Year.	Wool Exported.		Minerals Exported.	
	Quantity in lbs.	Value.	Quantity in tons.	Value.
1839	—	8,740	—	—
1840	—	8,740	—	—
1841	641,825	36,226	—	£390
1842	661,191	29,749	—	—
1843	1,159,574	46,568	20	128
1844	819,897	42,770	442	6,437
1845	1,331,888	72,236	1,158	19,019
1846	2,042,195	106,510	6,609	142,231
1847	1,114,862	56,131	9,301	174,017
1848	2,170,793	98,582	17,006	320,624
Total	9,942,225	505,252	34,536	662,456

Note.—For the years 1839-40 the wool exported is not stated; nor does there appear to have been any exports of minerals during the same period. In 1842 a small quantity of lead and copper was exported, but no mention is made of its being the produce of the colony.

The largest article of export consists of metallic ores, of which the discovery is recorded in the chapter on the history of the province, p. 648. The discovery of a silver-lead mine, termed the Wheal-Gawler, was owing to the wheels of a heavily-laden dray passing over a "bunch" of the mineral cropping, through the surface;—the brilliancy of the fragments revealed the treasure possessed by the colonists. The first export was some lead ore, in 1841, to the value of £390. The exports have subsequently increased in the following ratio:—

Year.	Ores in tons.			Value.			
	Copper.	Lead.	Emery.	Copper.	Lead.	Emery.	Total.
1843	1	18	—	£23	£104	—	£127
1844	277	203	—	4,009	2,427	—	6,436
1845	664	273	—	10,351	3,133	—	13,484
1846	2,691	189	—	58,395	1,919	—	60,314
1847	6,921	60	—	142,060	580	—	142,640
1848	10,632	271	68	199,134	3,964	£700	203,788
1849	16,323	682	—	310,172	10,452	—	320,624

There are about thirty-five mines in South Australia, of which about one-half are in active working; they are all copper, except two, copper and lead; five, lead and silver-lead; and one, copper and gold. These mines are all within 100 miles of Adelaide, except two mines, which are close to available harbours. A special survey of 20,000 acres has been purchased in the neighbourhood of Mount Remarkable, with a view to mining operations; and mining explorations have commenced near Port Lincoln. To what extent the mineral resources of the colony may yet be developed, it is impossible to predict.

Thus, in the short space of seven years, and in a colony whose duration only doubles that period, the exportable produce in metals has been augmented from £127 to £320,624; from one ton of copper ore to sixteen thousand tons. Of the copper ore raised in the year 1848, there was exported to Great Britain, in value, £206,605; and of the lead ore, in the same year, to Great Britain, £3,215. India and China afford large and profitable markets for any quantity of copper or lead above what England may require. Iron ore and mineral iron exist in ponderous masses in various parts of the province: gold, in a black metallic-looking sand, has been found in the bed of the Torrens river; it is also said to exist, in considerable abundance, in other places, and one or two gold mining companies have been formed at Adelaide for the collection

of the precious metal. To afford some idea of the progress of mining operations in the

colony, I subjoin a list of the mines in the colony at the close of the year 1848:—

Name.	Date of Formation.	Where established.	Capital.
Montacute Mining Company . . .	Mar. 1845	Adelaide	£5,000, in 1,000 shares.
South Australian Mining Association	16 April 1845	"	12,320, increasable to £20,000.
Princess Royal Mining Company . .	16 Oct. 1845	"	20,000, in 400 shares of £20 each.
Paringa " " . . .	13 Nov. 1845	"	20,000.
Wakefield " " . . .	1845	"	5,000.
Glen Osmond Union " " . . .	20 Nov. 1845	"	30,000, in £10sh. inc. to £50,000.
Australian " " . . .	1845	London & Tungkillo	400,000, paid up £80,000.
Adelaide " " . . .	16 May, 1846	Adelaide	10,000, in 2,000 shares.
North-Kapunda " " . . .	13 June 1846	"	22,000, all paid up.
Mount Remarkable " " . . .	3 Nov. 1846	"	25,000.
Victoria Gold Mine	1846	"	20,000, in 10,000 shares.
Prince Albert " " . . .	1848	"	5,000, in 1,000 shares.
Port Lincoln " " . . .	3 May, 1848	Port Lincoln . . .	3,000, in 600 shares.
Barossa " " . . .	1848	London	30,000.
Royal " " . . .	1848	Adelaide	50,000, in 5,000 shares
Enterprize " " . . .	1848	"	3,000, in 1,000 shares
Provincial Mining Association . . .	Aug. 1848	"	6,000, in 1,000 shares.
Kapunda Mine	—	"	—
Wheal-Granger Mine	—	"	—
Wheal-Gawler "	—	"	—
Belvidere "	—	"	—
Kanmantoo "	—	"	—
Greenock Creek "	—	"	—
Adelaide Ore Smelting Company . .	2 Dec. 1847	Near Albert Town .	10,000, in 400 shares.
Assoinga " " . . .	24 May, 1848	Tothill's Gap . . .	—
Patent Copper " " . . .	—	Koorunga, &c. . . .	—

Note.—There are no particulars published where the dash is inserted.

All these companies, except the *Australian Mining Company* and the *Barossa Range Association*, have been established in the colony. The *Australian Company* has already received about 1,500 tons of copper, which average about thirty-five per cent. of pure copper. They have pushed forward the workings at their mines at Tungkillo with much energy, driven an adit to the extent of 180 fathoms, and laid down a tram-road of 150 fathoms. Steam power, pit work, and other machinery for three shafts, sufficient to take the mine down 100 fathoms below the adit, together with a general supply of mining implements and stores, have been recently sent out to the colony by the board of directors in London; and under the management of able officers, and with practical Cornish miners, the efforts of this spirited company will, it is to be hoped, reap an ample reward.

After the discovery of the Kapunda copper mine in 1843-4, by Captain Bagot's son and Mr. Dutton, the attention of the colonists was strongly directed to the subject, and at the end of 1844, and beginning of 1845, reports were rife in Adelaide, that a "monster mine" of untold wealth had been found by a shepherd: the precise locality was for some time kept secret; and

after great exertions to raise £20,000 in Adelaide, owing to the depressed state of the province, two associations collected the required sum, and purchased 20,000 acres, by special survey, in the vicinity of the Razorback mountain and Burra creek, lat. 33° 40' S., long. 13° 98' E., eighty-five miles north by east from Adelaide. The two associations having lineally divided the property, apportioned it by lot, the northern half fell to those who formed the *Adelaide Mining Company*, and has been called Wheal-Grey; the southern half became the property of an association called the *Princess Royal Mining Company*.

The progress of that portion of the Burra-Burra mine termed the *South Australian Mining Company*, for three years ending 30th September, is thus shown:—

Particulars.	1846.	1847.	1848.	Total.
	Tons.	Tons.	Tons.	Tons.
Ore raised	6,359	10,794	16,231	33,386
Carted to P. Adelaide	2,726	6,963	11,731	21,421
Sold there	10	1,067	3,203	4,481
Shipped to Gt. Britain	2,453	5,370	7,588	15,413

The dividends paid from the produce of this mine are very extraordinary. *First* dividend, 24th June, 1847, *fifty* per cent.; amount, £6,160: *second* dividend, 8th July,

1847, *fifty* per cent.; amount, £5,160: *third* dividend, 18th August, 1847, *one hundred* per cent.; amount, £12,320: *fourth* dividend, 1st December, 1847, *two hundred* per cent.; amount, £24,640: *fifth* dividend, 1st March, 1848, *two hundred* per cent.; amount, £24,640; *sixth* dividend, 1st June, 1848, *two hundred* per cent.; amount, £24,640: *seventh* dividend, 1st September, 1848, *two hundred* per cent.; amount, £24,640. Total sum, dividends, in fifteen months, amounting to *one thousand* per cent. = £123,200, of which £119,850 have been actually paid. This prosperity continues.

In the half-yearly report (19th April, 1848) of the Burra-Burra mine, it was stated that there were 567 operatives engaged in raising and dressing the ore, and in other pursuits connected with their establishment: that in future, so long as the then satisfactory prospects continued, the directors proposed "paying dividends of two hundred per cent. on the capital stock, on the first day of every third month." The funds necessary to purchase the land in which the mine is situated were procured by issuing 2,464 shares, of five pounds each, the greater number of which are held by the colonists, and are now saleable at about one hundred and twenty pounds!

The following return, compiled from the Swansea ticketing papers, exhibits the produce shipped from the South Australian mines, during the years 1846-7:—

Mines.	1846.		1847.	
	Tons.	Value.	Tons.	Value.
Burra-Burra . .	1,176	£20,684	4,351	£94,263
Kapunda . . .	831	16,726	1,480	27,769
Montacute . .	265	4,370	55	1,029
Kanmantoo . .	78	1,259	228	3,236
Paringa . . .	19	394	100	1,608
Princess Royal .	—	—	60	1,221
Total . . .	2,369	43,433	6,274	129,126

The average price, per ton, obtained for the ores thus sold, was, in 1846, £18 7s. 2d.; in 1847, £20 1s.; but the heavy depreciation which subsequently took place in the copper market, very materially diminished the amounts realised for South Australian ore. The average cost of raising the ore, including every item previous to shipment, was about £6 sterling per ton; freight and charges to Swansea, £5 15s. per ton: leaving, at £20 per ton, more than £8 per ton

clear profit. The formation of a tram-road from the Burra-Burra mine to the city of Adelaide, and of a railroad from the city to the port, as now proposed, will greatly reduce the cost of transit from the mine to the shipping, which is considerable. For instance, from September, 1845, to March, 1847, the cartage alone was £21,466.

The distance of South Australia from England has induced the colonists to direct their attention to smelting the ore at the mines, a company has been recently formed at Adelaide, and the Yatala smelting works are now in progress, at a convenient position between the city and port of Adelaide. Another set of smelting works have been constructed near the Burra-Burra mines, contiguous to an extensive forest, by Messrs. Walters and Williams, in connection with Messrs. Schneider and Co., of London, at a cost of £70,000. The Messrs. Thomas, a well-known and respected family from Cornwall, possessed of much experience in mining, have erected a copper smelting furnace near the South Australian Company's mine at Kanmantoo; other smelting establishments are in progress, including small furnaces for smelting lead; and, in a few years, no more of the poorer ores will be shipped from South Australia, by which a considerable increase of profit must accrue to the colony and to the mining proprietors.

The following is a comparative return of manufactories and works in the province of South Australia, from the years 1844 to 1848:—

Description of Work.	1844.	1845.	1846.	1847.	1848.
Barilla manufactory . .	1	1	1	1	1
Boat-builder	—	—	1	1	1
Boiling down estab- lishments	—	—	—	2	2
Breweries	9	18	13	15	14
Candle-maker	—	—	—	1	1
Cloth and woollen ma- nufactory	—	—	1	1	1
Coach manufactories . .	2	3	4	4	4
Flour mills—Steam . . .	3	11	15	15	25
Wind . . .	7	8	8	8	
Water . . .	2	3	1	2	
Cattle . . .	4	2	2	—	
Foundries—brass & iron .	3	4	2	2	2
Machine manufactories .	4	5	6	4	4
Maltsters	—	10	2	2	2
Organ-builder	—	—	1	1	1
Pottery	1	1	—	—	—
Salt-manufactory	1	1	1	1	—
Ship-builders	—	—	1	2	2
Smelting works	—	—	—	—	2
Snuff and tobacco ma- nufactories	1	3	1	1	1
Soap and candle manu- factories	4	4	4	3	2
Soap-makers	—	—	—	2	2
Tanneries	7	8	6	7	7
Water-works	1	1	1	1	1

The return for the year 1848 is given from the Blue Book at the Colonial-office; but, excepting the works for smelting copper, there does not appear to have been any increase in the manufacturing establishments for the last few years.

The mechanics in the colony are said to be skilful workmen, and the machinery made is of first-rate character. Seven vessels of a small size have been built at Adelaide,

and they are creditable specimens of naval architecture.

AGRICULTURE.—The neglect of this staple source of prosperity, during the early days of the colony, has been previously stated. Ample amends have since been made for this inattention; and the progressive increase of cultivation is shown in the annexed statement of the acres in cultivation from the year 1840 to 1848:—

Year.	Number of Proprietors.	Wheat.	Barley.	Oats.	Maize.	Potatoes.	Garden.	Vineyard.	Total.
1840	—	1,059	388	424	192	440	—	—	2,503
1841	—	4,154	897	501	714	456	—	—	6,722
1842	873	14,000	2,700	700	850	690	850	—	19,790
1843	1,300	23,000	3,300	790	290	470	840	—	28,690
1844	1,357	18,980	4,264	1,045	241	397	761	—	26,918
1845	1,209	18,838	4,312	1,485	86	459	63	—	—
1846	1,714	26,134	3,489	1,963	106	590	896	111	—
1847	1,837	25,920	5,840	2,946	161	381	993	198	36,440
1848	1,846	29,737	8,479	3,977	4,602	591	1,300	219	48,911

The estimated average per acre is—for wheat, 21 bushels; barley and oats, 25; potatoes, 4. The number of acres enclosed was, in the year 1847, 94,684; and in 1848, 125,643.

The state of each district is shown by the following account of the number of acres in crop in 1848, which shows that, on an average, each landed proprietor has about twenty-seven acres of land under cultivation:—

Districts in 1848.	Number of Landed Proprietors.	Wheat.	Barley.	Oats.	Maize.	Potatoes.	Garden.	Vineyard.	Total Acres.
Adelaide	978	12,744	4,949	2,517	4,579	211	819	171	25,990
Encounter Bay	39	577	81	11	10	12	15	2	708
Gawler Town	232	5,153	1,727	233	6	43	178	22	7,361
Mount Barker	388	6,834	960	767	4	289	187	18	9,058
Mount Remarkable	20	95	20	171	2	16	32	2	338
Port Lincoln	18	45	17	28	—	3	12	2	107
Willunga	171	4,289	725	250	2	22	56	3	5,247
Total	1,846	29,737	8,479	3,977	4,602	595	1,300	219	48,911

Up to the 1st of January, 1849, the number of acres surveyed in South Australia was 465,943; add proportions for roads, 22,641; for the city of Adelaide and park, 3,400; total, 491,984. The number of acres selected was 159,188. In the surveyed lands, 198,997 acres were special; and of these, but 52,400 were selected.

The agricultural and horticultural products are similar to those of the Australian colonies previously described. The vine thrives well, and the product of wine and brandy is increasing.

South Australia was, on its foundation, in 1836-7, supplied with live stock from New South Wales and from Van Diemen's island. Large parties of "overlanders" arrived at Adelaide by travelling along the banks of the Darling, Murrumbidgee, and Murray rivers. The number of stock as-

essed for the years 1839, 1844, 1845, 1846, and 1847, was—

Year.	Horses.	Horned Cattle.	Sheep.
1839	800	7,600	108,700
1844	902	22,711	355,689
1845	1,044	26,146	480,669
1846	1,826	56,986	681,374
1847	1,705	56,375	784,811

Note.—The horses and horned cattle are above the age of six months, and the return of sheep includes weaned lambs.

The Blue Book for 1848 only contains returns for the Adelaide district, viz.—horses, 686; horned cattle, 55,083; sheep, 838,394. It is stated that there are now in the whole province—horses, 5,000; horned cattle, 70,000; sheep, 1,000,000; goats and pigs, 20,000. The increase of sheep is computed at twenty per cent. per annum.

In 1843-4, Mr. Ridley, an intelligent South

Australian colonist, invented a machine which reaped and threshed the corn at the same time. The machine is driven forward by two horses; at the fore end are six prongs, three on each side, which embrace the entire width of the wheel-track, and serve to collect the ears into the narrower range of teeth, which extend into a cylinder, in the form of a comb; between these teeth the neck of the straw passes, and the head or wheat-ear is guided into the lower cylinder, where it is caught by the "beaters," which make 600 revolutions per minute. The grain is beaten out of the ear, and thrown up a curve, whence it falls into the receiving-box, at the bottom of the cart, and the chaff flies off by a sort of chimney, at the upper and back end of the cart. This invention would only answer in a climate where the corn was so dry that it would separate from the chaff at the first blow of the beater. With two horses and two men, a farmer may thus reap and thresh a field at the rate of one acre per hour.

PRICES IN 1848.—Wheat, 4s. 6d. per bushel; barley, 4s. 6d.; oats, 4s.; maize, 3s.; potatoes, per ton, £3 10s. to £5; grapes, per lb., 2d. to 9d.; peaches, per dozen, 4d. to 8d.; melons, per cwt., 5s. to 6s.; apples, per lb., 5d. to 9d.; nectarines, per dozen, 6d. to 9d.; wheaten flour, per barrel of 196 lbs., 22s. to 29s.; wheat, per imperial bushel, 3s. 9d. to 5s.; wheaten bread, per lb., 1½d. to 1¾d. Horned cattle—cows, £2 to £5; steers, £1 15s. to £3; working bullocks, £3 to £5. Horses, £15 to £20. Sheep—ewes, 4s. to 6s.; wethers (60 lbs.), 7s. Goats, 3s. to 5s.; swine, 6d. per lb.; milk, per pint, 2d.; butter, fresh, 1s. 2d. to 1s. 8d. per lb.; salt, 1s. to 1s. 3d.; cheese, 9d.; beef and mutton, 2½d.; pork, 6d.; rice, 3d.; coffee, 10d.; tea, 2s.; sugar, 3d. to 3½d.; salt, 1d.; wine, per dozen, 25s.; brandy, per gallon, 21s.; beer, colonial, per hogshead, £4 2s. 6d.; foreign, £7 to £8; tobacco, per lb., 3s. 6d.

WAGES FOR LABOUR IN 1848.—*Domestic*, male, £25 to £32 per annum; female, £14 to £22. *Predial*, £31 to £39 per annum.

Trades.—Bakers, 4s. to 5s. per diem; blacksmiths and wheelwrights, 6s. 6d.; bricklayers, masons, and plasterers, 7s. 6d.; brickmakers, per 1,000 bricks, 35s.; butchers, 3s. 6d. to 4s. 2d. per diem; bullock drivers, cabinet and carriage makers, coopers and carpenters, 7s. 6d.; saddlers, 6s.; shoemakers, 7s. 6d.; sawyers, per 1,000 feet, 9s. 6d.; shepherds, with board and lodging, average £31 4s. per annum; porters, per hour, 7d. to 8d.; farmers, 5s. per diem.

The colony is greatly indebted for its foundation (see p. 638), and for the interest which has been felt in England for its welfare, to an association termed the *South Australian Company*, which in June, 1850, held its fourteenth annual meeting, and declared a dividend of four per cent. per annum, free from income-tax. The objects of this company were, the purchase and improvement of lands, and their lease and sale, when so improved. It has also introduced improved breeds of stock into the colony, and worked some mining property. Meritorious efforts have been made for the construction of wharfs and warehouses at Port Adelaide, where ten ships may now load or unload, as if they were in the London Docks. The company seem now to be directing their more special attention to leasing land, of which they possess about 60,000 acres; offering it on the following favourable terms to settlers:—

"Engagements for leases for a term of twenty-one years, at very moderate rates, with a right of purchasing the freehold.

"The sections, as marked off by the government surveyors, contain either 80 or 134 acres; so that the farms will consist of 67, 80, 134 acres, or any larger quantity, as may be agreed on.

"The company's manager will point out five portions of freehold land, each equal to the quantity to be leased, and from them the tenant may select one. The yearly rent will be 4s. per acre, during the first period of seven years—6s. per acre, during the second period of seven years, and 6s. per acre, during the third period of seven years.

"In order to provide for the due cultivation of the farm, every applicant should possess a small amount of ready money, to be deposited (on signing the agreement) with the company, in London; and for which (without any deduction) an order will be given on their manager in the colony. The lease will stipulate, that the amount shall be expended solely in improving the land; and the lowest sum recommended to be thus deposited as farming capital, for a farm of 67 or 80 acres, is £150; and for a farm of 134 or 160 acres, £300. It is advisable, however, that every tenant should have, either from his own resources, or his friends' assistance, nearly as much capital besides, as he must incur expenses for outfit, reaching the ship, purchasing implements, freight of extra baggage and stores, &c., &c.; and ought to have a small amount available for use, on his landing in South Australia. To accommodate settlers possessed of limited means, the company will not object to two partners being associated in a lease, provided their respectability and other qualifications be ascertained; and should the tenant need assistance to erect farm-buildings, or to fence his land, the company will aid him with an advance proportionate to the capital expended by him on the farm, for which advance the rate of interest current in the colony will be charged.

"This advance, or loan, will be made after the approved expenditure upon the farm of the capital deposited by the tenant, and may be repaid by instalments; after repayment, the tenant will gene-

BOOK V.—WESTERN AUSTRALIA.

CHAPTER I.

POSITION, AREA—AND EARLY HISTORY OF SETTLEMENT.

THIS division of Australia, generally known as the "Swan River" colony, comprises all that portion of the island-continent situated to the westward of the 129th degree of E. long., and extends between the parallels of $13^{\circ} 44'$ and 35° S.; is bounded on the south by the Pacific, on the west-north-west by the Indian Ocean, on the north by the Arafura Sea, and on the east by the meridian line above-named. The length from north to south is computed at 1,280 miles, and the breadth from east to west at 800 miles; the area is about 1,000,000 square miles, or more than eight times the size of the United Kingdom of England, Wales, Scotland, and Ireland.

HISTORY.—The "Swan River Settlement" has been a bye-word and a reproach, frequently cited by the advocates of the so-called Wakefield system to illustrate the evils of a different plan of colonization, while defending themselves from the blame so unsparingly bestowed upon them during the period of distress and depression under which South Australia laboured. In the previous book I have expressed my conviction, founded upon the facts therein stated, that the latter colony could not, either in its prosperity or its adversity, be fairly used as a general argument on one side or the other; it remains to be seen whether the Swan River settlement in its turn presents any tenable ground for the sweeping assertions in support of which it is adduced, mainly on the score of its having been "*a complete failure.*"

Even were this the case, it would not necessarily follow that the original plan was the sole cause of so unfortunate a result; for the grievous errors and inconsistencies by which the practical working of the most carefully-framed human system may be perverted, and the very existence of a colony endangered, is painfully evident in the early history of too many British colonies, though counterbalanced by the energy, the industry, and the sound principles of government apparently inherent in the minds of the settlers themselves.

In the present instance a succinct account of the history of the Swan River settlement will furnish data on which to found an opinion of how far the stigma attached to it as a total failure is really merited, and the causes to which that failure, or, on the other hand, the slow advances which it is admitted, even by its best friends, to have made, can be fairly attributed.

The term *Swan River* was given to this portion of Western Australia by Vlaming, a Dutch navigator, who discovered it in 1697, and found in the neighbourhood many black swans. In 1801, the French corvette *Naturaliste* visited this coast, and M.M. Bailly and Heirisson, on 17th June, entered the river Swan in a cutter, observed large flocks of black swans, pelicans, and parrots, and were surprised, after three days' explorations, with the forests and geological formation of the country.

Public attention was first directed in England to Western Australia by Captain (now Sir James) Stirling, R.N., who, when in command of H.M.S. *Success*, made a report, dated the 18th of April, 1827, pointing out the advantages of our occupying this portion of that vast island, and thus prevent the execution of a project then entertained by the French government for the formation of a Gallic Australian settlement.

Early in the year 1829, Captain Fremantle, R.N., of H.M.S. *Challenger*, hoisted the British flag near the entrance of Swan River, and took formal possession of the territory on behalf of the British crown, in the name of his Majesty George the Fourth. A portion of the country now included in the limits of Western Australia, situated on the south coast, and termed King George's Sound, was occupied in 1825-6, by a detachment of troops and persons sent from Sydney under the command of Major Lockyer. This detachment was withdrawn in the year 1830-1.

It was generally understood that his Majesty's government would not undertake

at the public cost the formation of a settlement on the western coast, a proposition was therefore made on the part of Thomas Peel, Esq., Sir Francis Vincent, E. W. Schenley, Esq., and others, to further the views of government in founding a colony at little or no expense to the mother country. These gentlemen offered to provide shipping for the conveyance of 10,000 British subjects within four years from the United Kingdom to the Swan River, furnished with provisions and every other necessary, and to maintain three small vessels running to and from Sydney, as occasion might require. They estimated the cost of conveying this number of emigrants at £300,000, or £30 per head, and required in return an equivalent grant of land at the rate of 1s. 6d. an acre, making 4,000,000 acres, out of which they would engage to provide every male emigrant with no less than 200 acres of land, rent-free. This project fell to the ground owing, I believe, to the inability of the proposers to satisfy the government as to the adequacy of their means of carrying it into effect, and another plan for the execution of the same object was issued in December, 1828, from the Colonial-office, of which department Sir George Murray was then the chief.

According to this project no expense was to be incurred by the government, either in conveying emigrants, or supplying them with provisions on their arrival; but intending settlers reaching Swan River before the close of the year 1830, were to receive in the order of their arrival allotments of land, rent free, at the rate of forty acres for every sum of £3, which they could prove themselves to the satisfaction of the Lieutenant-governor, prepared to invest in the improvement of the land. Those who should incur the expense of taking out labouring persons were to be entitled to an allotment of land, at the rate of 200 acres, considered equivalent to £15 for the passage of every such person, without reference to any other grants of which they might become possessed. In the class of "labouring persons" were included women, and children above ten years old. With respect to the children of labouring people under that age, it was proposed to allow forty acres for every child above three years old; eighty acres for every child above six years old; and 120 for every child above nine, and under ten years old.

The title to the land was not to be granted

in fee simple, until the settler had proved, to the satisfaction of the Lieutenant-governor, that the sum required (*viz.* 1s. 6d. per acre), had been actually expended in some investment, or in the cultivation of the land, or in solid improvements, such as buildings, roads, or other works of that kind.

Any land, thus allotted, of which a fair proportion, at least one-fourth, should not have been brought into cultivation, or otherwise improved, to the satisfaction of the local government, within three years from the date of licence of occupation, was to be liable to one further payment of 6d. per acre for all the land not so cultivated or improved, into the public chest of the settlement; and, at the expiration of seven years more, so much of the whole grant as should remain in an uncultivated or unimproved state was to revert absolutely to the crown. Every grant was likewise to involve the condition, that, at any time within ten years from the date thereof, the government might resume, without compensation, any land not then actually cultivated, or improved, as before-mentioned, which might be required for roads, canals, or quays, or for the site of public buildings.

Under the head of *investment of capital*, his Majesty's government agreed to include stock of every description, labourers, provisions, all implements of husbandry, and other articles applicable to the purposes of productive industry, or necessary for the establishment of the settler on the land; the amount of any half-pay or pension receivable from his Majesty's government was also to be considered as so much capital. After the year 1830, land was to be disposed of to those settlers who might resort to the colony on such conditions as his Majesty's government might then determine.

Mr. Thomas Peel, aided, to the extent of £20,000, by the late Mr. Solomon Levy (then of the firm of Cooper and Levy, of Sydney and London), undertook the responsibility of making the first efforts for the foundation of the colony. Mr. Peel was to receive 250,000 acres, on condition of taking out 400 emigrants, with liberty to extend the grant to 1,000,000 acres, previous to the year 1840, by receiving 40 acres for every child above three years, 80 for every child above six, up to ten years 120, and exceeding that age and upwards 200 acres for each person conveyed to the colony.

Colonel Latour also availed himself of the governmental terms, took out settlers stock,

&c., and became entitled to a tract of land of considerable extent.

At the first glance it may appear that this extensive tract was granted on very easy terms, but it will not be thought so when the circumstances of the case are duly considered. The estimated cost of the conveyance of an adult from the United Kingdom to the west coast of Australia was then about £30; no supplies were procurable on the spot, and the distance from Sydney (1,134 miles), together with the difficulty of doubling the south-west coast from the eastward for six months in the year, rendered the establishment of a colony at the Swan River twenty years ago an extremely expensive and arduous undertaking, and a very different matter to the creation of settlements at Port Phillip and Adelaide eight years later. To these latter places it must be remembered that sheep, cattle, and horses were driven overland at a comparatively small cost from the southern pastoral districts of New South Wales by the same route, and by a short sea voyage from Van Diemen's land; surplus labour was also obtained from the older colonies, whereas stock brought into Western Australia was necessarily imported by sea, and it was estimated that each sheep, including freight, insurance, and allowing for losses, cost the colonists £20.

By the exertions of Mr. Peel, of Colonel Latour, and other gentlemen, his Majesty's government was enabled to announce that a settlement would be formed on the west coast of Australia; Captain Stirling, R.N., was appointed civil superintendent, with authority to select a grant of land for himself to the extent of 100,000 acres; and early in the year 1829, a number of emigrants left England to form the new colony. The government of that day were certainly to blame for the want of forethought which marked this stage of the proceedings; no survey of the land had been made, nor any inquiries as to its resources; no system was organized, no public or corporate body in England was responsible for the due management of the expedition, and the consequences of these omissions were most distressing. Not even a secure anchorage had been ascertained.

* On the 1st June, 1829, the *Parmelia* transport arrived at Swan River, with Captain Stirling as chief, and several of the government officers for the new colony. On the 8th June, H.M.S. *Sulphur* arrived, with a detachment of H.M. 63rd regiment, under the command of Captain Irwin. On the 17th, the first public proclamation was issued, and the appointments

The settlers were landed on the beach, in mid-winter, in the neighbourhood of a bare limestone rock, the country around devoid of agricultural or pastoral capabilities, but filled with hostile savages. The settlers began to arrive in the middle of the year 1829,* and by the end of the same year, twenty-five ships had reached the new settlement; the number of residents were stated to be, 850; of non-residents, 440; number of cattle, 204; of horses, 57; of sheep, 1,096; of hogs, 106; and the value of property giving claims to land, was quoted, during these few months, at £41,550; the value of cargo left by ships, up to the end of December, was £50,428. In 1830, the number of immigrants increased; in January, 6 vessels arrived; February, 5; March, 4; April, 1; May, 6; July, 2; August, September, and October, each, 1; November, 2; and December, 1 = 30. The number of settlers brought by these ships was, 1,125; and the cargo left at the new town of Freemantle by them, was valued at £144,177. In 1831, the arrivals were less frequent, and the vessels numbered only 17; and after the first quarter, 1832, the immigration of persons and property ceased, except so far as related to the friends and funds of persons previously established in the colony. During this period, the amount of property introduced into the colony by the immigrants, on which applications for land were based, amounted to £120,000, and consisted of live stock, implements of husbandry, provisions, wearing apparel, furniture, and other goods.

Officers of the army and navy, and the officers on the civil establishment of the colony, were authorized by Sir George Murray to receive assignments of land on the terms of importation of property which were open to the public. To some naval and military officers who engaged to return to the settlement at an early period with the property necessary to qualify them to receive allotments, permission to select land was granted, and the territory so selected was reserved for a considerable period. Thus, many of the settlers who arrived in 1829 and 1830, on expressing a desire to possess themselves of lands in favourable localities,

of the official authorities notified. In August the *Culista*, *St. Leonard*, and *Marquess of Anglesea* arrived, with colonists, stock, and merchandize. In October nine vessels reached the Swan River, with settlers and stock; in November, two ships; and in December the *Gilmors*, with Mr. Peel and 170 passengers.

conformable to the amount of property then in their possession, were informed, "that ten thousand acres is reserved for Captain A.; that six thousand acres to Lieutenant B.; that five thousand acres to Mr. C.;" and so on, over the best situated applotments. Between June, 1829, and the close of 1831, the quantity of land assigned to or reserved for, civil, naval, and military officers, was as follows:—*Civil*, 19 persons, 162,062 acres; *naval*, 16 persons, 33,680 acres; *military*, 11 persons, 30,862 acres. There were also reservations for 15 private individuals, of 60,880 acres.*

Thus nineteen of the civil servants of the crown, selected and reserved for themselves, naturally out of the best lands, applotments which averaged to each about 8,530 acres.† In this list the governor (Sir James Stirling) stands marked for 100,000 acres, which he received by special award from Sir George Murray, then her Majesty's secretary for the colony. This immense grant was selected in different places, and is stated to have been shifted from time to time, according to the prospective value of new positions.‡

The colonial secretary received 5,066 acres; harbour-master, 7,592; colonial surgeons, 5,000 each; colonial naturalist, 5,000; storekeeper, 5,000; surveyor-general, 5,600; collector of revenue, 5,000; colonial chaplain, 5,020; civil engineer, 4,400; draftsman, 2,560; clerk in survey office, 1,280; and a Captain Butler, whose name appears among the civil officers, 2,560 acres. It is presumed that all these civil officers brought

property into the colony, in conformity with the official regulations.

Among the naval grantees were the names of Captains Dance, of H.M.S. *Sulphur*, and Freemantle, of H.M.S. *Challenger*, each 5,000 acres; and Sandilands, of H.M.S. *Comet*, 2,560 acres. Lieutenants, mates, masters, and surgeons of those vessels had grants appropriated to them, varying from 1,280 to 3,840 acres. None of these gentlemen could, of course, leave their ships, and most of the grants were reassigned, or remained unoccupied and unassigned.

Among the military grantees were captains Irwin and Mackie, of the 63rd regiment, 10,000 acres; Deputy Assistant-commissary-general Lewis, 5,012 acres; Lieutenant Dale, 63rd regiment, 448 acres. Among the private individuals, for whom 60,880 acres were reserved, was the name of Mr. Gellibrand, for whom 10,000 acres were reserved, on the promise of his importing into the colony a sufficient amount of property to entitle him to the selection. The other reservations varied from 3,000 to 9,000 acres. Moreover, in the years 1829, '30, and '31, there were reserved for townships nearly 100,000 acres (98,590). For the town site of York alone, 38,400 acres were reserved; for Plantagenet, 17,000; for Clarence, 7,680; for Perth, 3,840. London, with upwards of 2,000,000 inhabitants, does not cover, probably, more than ten square miles = 6,400 acres.

With these antecedents, it would have been difficult for men§ unconnected with government, and unaided by public support,

* See Parliamentary Paper, No. 685, of 6th August, 1838, for details.

† It is said that the colonial authorities of 1829 gave the official servants of the crown who went out to found the Swan River colony, profuse grants of valueless lands, as compensation for the small salaries awarded to them.

‡ It is, however, due to Sir James Stirling, who possesses a high character in his profession, to state that great credit is due to him for the manner in which he surmounted the errors committed in the early proceedings of the colony. After the first disasters, he infused a new spirit into the desponding settlers, and it is mainly owing to his perseverance and unconquerable determination to succeed, that the place was not utterly abandoned.

§ Mr. Peel was ruined by his exertions to promote the establishment of the colony, at its commencement, and on 31st March, 1847, he was still in debt to her Majesty's government, £3,828, incurred by introducing a valuable body of men into the settlement. In 1847, the acting governor, with a view to the liquidation of part of this debt to the crown, agreed to accept the surrender of a block of land of 1,372 acres, at 20s. per acre

= £1,372, which was contiguous to the town site of Rockingham; the said block containing the deepest water-frontage in Mangle's bay, on which the town is situated. Major (now colonel) Irwin, who has laboured zealously for the benefit of Western Australia, gives Mr. Peel credit for introducing men of good conduct, who were well acquainted with farming pursuits and handicrafts, and for bringing into the colony, towards the fulfilment of his contract, a population of 300 souls, with a property of £50,000.

Another instance of great hardship is recorded in the correspondence of the colonial office. Captain Bannister, formerly high-sheriff of Van Diemen's Island—an officer of great energy and considerable talent—accomplished, in 1831, after enduring much danger and privation, an exploratory over-land journey, in seven weeks, from Perth to King George's Sound; yet this gentleman declares himself to have been driven from the colony by the unjust treatment he experienced regarding the land allotments. A Mr. William Wise introduced property into the settlement to the amount of £1,984 (irrespective of ready money, which gave no claim for land,) and accordingly, under the regulations of December,

to have formed a colony, even in the loveliest and most fertile land on earth; and it is surprising that the attempt was not abandoned in the outset. The frightful struggles, which the settlers of 1829-30 had to undergo, are described in a "monster address," signed by nearly every non-official settler (including the magistracy, &c.), and presented to the governor of Western Australia, by a deputation of the leading gentry, in the presence of the members of the Executive and Legislative Councils. This address was transmitted by the governor to Earl Grey, and may be found at length in the Parliamentary Emigration Papers for 1849-50.

The grievances therein complained of, deserve mention, not only as forming a chief cause of the slow progress made by the colony during ensuing years, but also as affording a valuable example of what *should and should not be done* on similar occasions. The errors in this case appear to have arisen chiefly from sheer carelessness, and the most unaccountable want of forethought on the part, it would appear, of all concerned. Had the proposal been to colonize one of the Channel Islands, instead of to form a settlement in the southern hemisphere, matters could hardly have been taken more easily.

1828, was officially informed by the colonial secretary, that he "had entitled himself to a grant of land to the extent of 26,453 acres." Mr. Wise received his "location order," which cost him, in actual outlay, £1,001 5s. 9d.; there was no surveyed land of which he could make sure, and after the waste of the substantial property he had introduced into the colony, Mr. Wise, for the sake of his family sold his "location order" to Captain Bannister, and proceeded to Van Diemen's Island. But from that day to this, Captain Bannister has never been put in possession of the land to which he had thus become entitled, and most probably will never receive an acre or a shilling for his property.—(See correspondence with the Secretary of State for the Colonies in 1836-7.)

* The following extracts from the address before alluded to, paint in glowing language a vivid, but, it is to be hoped, somewhat exaggerated picture of the suffering which attended the foundation of the Swan River settlement:—

"The entire material of a settlement, the official staff, settlers, property, and live stock, were hurried out to an unknown wilderness before one acre was surveyed, before one building had been erected, before even a guess had been formed as to the proper scene of their labours, before the slightest knowledge had been obtained of the soil, climate, products, or inhabitants. Nay, further, it was absolutely made a condition of the grants of land, that the emigrant should not only arrive, but bring his family, dependents, and property, into the colony while in this state.

"The ghastly spectacle of the town-site of Clarence

The manner in which the terms for the grant of land were framed rendered its acquisition dependent on arrival in a stated time, and induced the emigrants to bring out in excess servants, live stock, machinery, &c., of which each took more than he required. The season selected for their arrival, in a country known to contain hostile natives, was the month of June (there mid-winter). Not a shed had been provided for their reception; not an acre had been surveyed; and, as before stated, even a safe anchorage had not been ascertained. Several ships were dashed to pieces on the beach, which was crowded with masses of human beings—families with infant children, ladies, civil officers, sailors, soldiers, and farmers; while blood and cart horses, milch cows, prize bulls, sheep, goats, poultry, pigs, pianofortes, ploughs, mills, barouches, casks, furniture, bedding, tools, and seed-corn lay heaped together, drenched with torrents of rain.

The confusion was complete; the leaders of the enterprise were equally at a loss with the settlers to know what to do or advise. Some demanded to be led to their lands; others gave way to despair: servants attacked the spirit-casks; masters followed their example.* The farmers were told they must wait, *wait* till lands were dis-

—its sole edifices crowded, hurried, and neglected tombs—its only inhabitants corpses, the victims of disease, starvation, and despair—the sea-beach strewn with wrecks—the hills and borders of the rivers studded with deserted and half-finished buildings—bear witness to these consequences, and speak of brave men, delicate females, and helpless children, perishing by hundreds on a desert coast from want of food, of shelter, and even of water, and surrounded by armed hordes of angry savages. It were wholly impossible, sir, to estimate the vast amount of property of every sort buried for safety in the sands of the shore, and never again recovered, or the multitude of most valuable and high-bred stock of all descriptions, whose skeletons whitened the beach or filled the morasses they had been forced to enter in the desperate search for even fresh water. Can we wonder, then, that thousands rushed from such a scene with the relics of their capital, to people other colonies; or even that numbers sat down in the frenzy of despair beside the spirit-cask, never to rise from it alive? Can we wonder that the name of Swan River should, throughout the civilised world, become identified with failure and ruin, and that the survivors of such carnage should be left alone by their fellow-men to carry on an enterprise so dreadfully begun? Or may we not rather indulge in a justifiable pride in the resources of a country and the energies of a people who, from such a commencement, have, under Providence, elaborated even the civilization which your excellency may already see around you? But these terrible scenes, brought on by the unjustifiable attempt

covered, and then *wait* until they were surveyed. In fine, a quarter of a million sterling of property was destroyed; the means of the immigrants dissipated; their live stock perished; many died; and numbers, as soon as practicable, fled from this scene of ruin, carrying with them the wreck of their fortunes. I have been assured by a colonist of high character, and holding an official position, that fifteen years elapsed before the surveys were sufficiently advanced to enable a settler within five miles of the capital to put up a boundary fence.

Mr. James Walcott, one of the first settlers, says—"I was, in common with many others, a severe sufferer, from the fact of the government being unable to redeem its pledge to the colonists arriving in 1829 and 1830 at the Swan River settlement. It was not till several months after my arrival that I was offered a very small grant on the Swan, by the local government, and then only in consequence of its being vacated by another party. In the mean time most of the stock imported had died at Freemantle, where there was no keep for them—in fact, of actual want. I may say, with safety, that one-half of the property I imported was sunk before I could get a location which offered any prospect of success."

Subsequently, when the few, after gallantly penetrating the forest, and discovering good farm lands, had raised the drooping spirits of the rest, and a chance arose that a fresh body arriving, with new capital and stock, might do well, the land terms were changed to the same as the old-established colony of Sydney, where no hazards were to be run. Almost at the same time companies arose to push forward other colonies, each one naturally vaunting the advantages of its own, and disregarding, if not disparaging the merits of the rest; and the neglected little settlement of Swan River was soon forgotten, and left to establish the foundation of an infant nation

to hurry a colony into existence before steps had been taken for its security, are far from being the termination, or even the most injurious, of the errors which have plunged us into our present difficulties. At the very time when the unhappy immigrants were crowding on the beach, wasting and losing all their means, the conditions of their immigration told them that they had but a limited time to select and improve their grants. And more monstrous still, this time was actually expired before these grants were surveyed.

"A minor, but yet very ruinous error, consisted in limiting the investments of capital, which produced a vast accumulation of the same articles, and

unaided by aught but the resources of its country and climate, and its own patient but over-taxed energies. The effect of the non-arrival of fresh immigrants in a colony so peculiarly constituted may be readily conjectured. The hired labourer rapidly acquired the means of working on his own account, and became desirous in his turn of obtaining assistance, and the ruin of those who depended upon hired labour was the consequence. And here lies the secret of the so-called failure of Swan River. In one, and in only one, respect has it really failed, and that is in attracting emigration; in almost every other it has succeeded. Its trade has increased, crime among the Europeans is almost unknown, *and its present—who are in general its original settlers—*have in proportion to their numbers, effected a creditable extent of tillage, and evinced a very praiseworthy spirit.

Every one at all practically acquainted with the subject of emigration, is aware of the immense influence exercised by the powerful London companies in favour of the colonies in which they are respectively interested. Is it, then, strange that a settlement, ill supported by government, and unrepresented (excepting for a brief period by the Western Australian Company) in the mother country, should have proved incapable of attracting the stream of emigration which it was the object of so much combined exertion to direct elsewhere? Besides, the miseries endured at the foundation of the colony, naturally gave rise to a strong prejudice in its disfavour.

To return to the proposition stated at the commencement of this chapter, this present instance would appear to be one of the many in which the error lies not in the system itself, but in the absence of the needful preparation, as well as careful supervision necessary to its successful working. Any colony, *equally neglected at home, and*

total want of others, and of money. The majority of the imported articles could not be of use for some years, and each settler was induced to bring more than he required, in hopes of sale. The want of storehouses caused the destruction of all these. As if sufficient means had not been used to destroy our capital, the system of location duties was added; by which the settler was compelled to prove that he had wasted 1s. 6d. per acre in permanent improvements. The result was, the erection of multitudes of cottages, fences, &c., in remote, and at the time, wholly uninhabitable places, which were, of course, allowed to become the prey of the elements, as soon as the expensive farce had been performed."

founded with as reckless improvidence with regard to surveys and shelter, and preliminary preparations, must, like Swan River, have been crippled, if not crushed, whether established on the "sufficient price" or any other system. Even the large grants of land referred to in a previous page, would not in themselves have proved injurious but for the imprudence of the authorities in not requiring sufficient security for the fulfilment of the annexed conditions; even as it is they appear to have exercised in some respects a favourable effect by giving a motive for continued exertion much needed under the circumstances.

It is pleasing to know, as will be shewn in the concluding observations on the colony, that the stationary state is passed, the development of the resources of the territory has commenced, and the tide of immigration is now setting in towards Western Australia.

With respect to the announcement relative to the disposal of crown lands in Western Australia, from the Colonial-office, December, 1828, 13th January, and 3rd February, 1829, granting land on certain conditions (see page 710) new regulations were issued from the Colonial-office, Downing-street, 20th July, 1830, by which 100 acres, valued at £15, were allowed for every labourer, including women and children above twelve years of age; 60 acres for every child between twelve and six years of age, and 30 acres for every child under six years of age. Lands allotted, if unimproved, to the extent of 3s. per acre, in two years, to be liable to quit-rent of 1s. per acre; if still unimproved in two more years, to revert to the crown, or be subjected to a higher quit-rent. The proportion of "capital," i.e. of stock, implements of husbandry, &c., which qualified settlers to receive land, was raised from 1s. 6d. to 3s. per acre. Subsequently the land sales' regulations adopted for the older Australian colonies were declared to be in force in Western Australia, where land is now only purchaseable from the crown at the minimum upset auction price of 20s. per acre. This high price has proved effective for the prevention of the sale of crown lands, for according to the evidence of Mr. Lefroy (an intelligent Swan River settler), before the House of Lords, 24th March, 1848—"There were in 1844 certainly quite a million of acres in the colony which could have been purchased for 3s. an acre." Much of this was probably poor land; and her Majesty's government, in a spirit of equity,

gave the original grantees, who had taken up injudicious and sometimes unavoidable allotments, an opportunity of exchanging three acres of bad land for one acre of good land. These "remission tickets" were stated in 1848 not to exceed £4,000 in value. The land alienated from the crown in Western Australia averages 350 acres for each man, woman, and child in the colony.

Before concluding this necessarily brief sketch of the origin of the colony, it is due to the settlement to notice the rise and fall of a company, whose failure has been unjustly ascribed to the character of the country.

The *Western Australian Association* had its origin in the meeting of an institution held in London, 23rd August, 1835, to watch over the interests of the colony. After several meetings and annual reports, a regularly organized joint-stock company was formed in 1841, under the auspices of Mr. Edward Gibbon Wakefield (one of the directors of the corporation), whose object was to purchase a large quantity of land in the colony from the original grantees, Sir James Stirling and Colonel Latour [to whom 113,000 acres were assigned, 29th Sept., 1829], at a cheap rate, with a view of selling it at the rate of £101 for 100 rural acres and four town sections of a quarter of an acre each; the choice of the allotments and town sections to be determined by lot.

A township or city, termed *Australind*, was to be laid out at Leschenault bay, "to extend over a thousand acres, exclusive of a reserve for public objects, such as quays, streets, squares, markets, churches, and public gardens." About this period Captain (now Sir George) Grey returned to England, bringing accounts of the fine country he had discovered in the neighbourhood of Champion bay (see topography), and stating also the existence of a good harbour adjacent. Nearly at the same time, it was announced that the extensive grants to Colonel Latour were forfeited to and reserved by her Majesty's government. This news, united with the representations of Captain Grey, induced the Western Australian Company to change their plan, and attempt the settlement of the northern district. The change, however, exciting considerable alarm, and the directors having offered to refund the capital of all who desired it, a large part of the subscriptions were withdrawn, and confidence in the enterprise paralyzed. Colonel Latour's claims

eventually proved to be valid, but the evil caused by their supposed forfeiture was irrecoverable.

The chief commissioner of the company, Mr. Clifton, left England in 1841, with the first detachment of emigrants. On reaching Port Leschenault, on his way to the new district, he received such communications from the governor, and such information respecting the supposed Port Grey, and the country in its vicinity, as induced him to found the colony under his charge on the spot originally contemplated, in Leschenault inlet, instead of at Port Grey.*

On the arrival of H.M.S. *Beagle*, Captain Stokes, accompanied by Mr. Clifton, proceeded to examine the territory concerning which statements so contradictory had been made; they sought in vain for the harbour, and described the country as unfit for the settler, being deficient in the three most necessary articles, water, timber for building, and food for stock.† Subsequent examinations have proved that Captain Grey's statements were, nevertheless, correct, inasmuch as there is a harbour now called Port Grey, and a fertile and extensive tract of country in its vicinity (see topography). But to return, Mr. Clifton, considering himself fully justified in the step he had taken, proceeded, with the counsel and concurrence of the local government, to establish the settlement on the shores of Leschenault inlet; setting aside the somewhat Utopian

arrangements and ground-plans sketched in London, for others more in unison with the physical features of the country. The first emigrants, however, had been obliged to follow the previous arrangements, which were found so harassing and unsatisfactory, as to induce several to abandon their allotments and leave the company's lands, and settle elsewhere.

Nevertheless, the energy and perseverance of Mr. Clifton appeared in a fair way of ultimately triumphing over all local obstacles; the substantial advantages of the site he had chosen were becoming evident, and promised solid, though not brilliant, success, when the Western Australian Company suspended operations, dismissed its officers, and practically abandoned the enterprise, since which period it has retained little more than a nominal existence.

The names of the governors and acting governors who have administered the affairs of Western Australia since its foundation, have been:—

Captain Sir J. Stirling, R.N. (governor)	1st June 1829
Captain Irwin, H.M. 63rd reg. (acting)	Sept. 1832
Captain Daniel, H.M. 21st reg. "	Sept. 1833
Captain Sir J. Stirling returned from } England }	Aug. 1834
John Hutt, Esq. (governor)	2nd Jan. 1839
Lieut.-Col. Clarke, K.B. (governor)	Feb. 1846
	Died 6th Feb. 1847
Major Irwin (acting)	7th Feb. 1847
Captain Fitzgerald, R.N. (governor)	Sept. 1849

CHAPTER II.

PHYSICAL ASPECT—COAST LINE—ISLANDS—HARBOURS—RIVERS AND LAKES— GENERAL TOPOGRAPHY OF THE COUNTIES—GEOLOGY—MINERALOGY— SOIL—CLIMATE—WINDS AND TIDES.

WESTERN AUSTRALIA is not marked, like the provinces of New South Wales, and of Victoria, by lofty mountain ranges, nor, like that of South Australia, by deep gulfs or bays; or distinguished by any great river, such as the Murray. Sheltered from the tremendous roll of the Southern Pacific, and laved by the more placid waters of the In-

dian Ocean, the west coast, between Sharks' and Geographe bays, presents a comparatively regular and unvaried outline; comprising, nevertheless, many estuaries or inlets, some of considerable size and depth, but barred with sandbanks at their entrance, so as to prevent their being safe harbours for large ships.

The coast-line north of Geographe bay is bounded, for a distance of thirty to forty miles from the land, by a bank of coralline

* See Mr. Clifton's Letter to Captain Stokes, published in the latter gentleman's *Discoveries in Australia*, vol. ii., p. 382. † Ibid.

or calcareous formation, such as is found on the coast of Sicily. The bank of soundings extends farthest off the north-west coast, as eighty-five miles north of Depuch island (De Witt's Land) a bottom of fine white sand was found at seventy-five fathoms. Between $19^{\circ} 50'$ and $20^{\circ} 10'$ S. lat., about forty miles from the islands fronting the coast, there are soundings of 200 fathoms. Off the south point of Sharks' bay, in $26^{\circ} 42'$ S. lat., soundings of grey sand were obtained in 137 fathoms, at thirty-seven miles distance from the land. In 32° S. lat., twenty miles off Rottnest or Garden island, the soundings are seventy fathoms.

The distinguishing feature of the colony is a somewhat elevated and occasionally steep and rocky range, termed the *Darling Hills*, which runs nearly parallel with the west coast, at a distance of about twenty miles from it, and extends from about 35° S. lat., near Point D'Entrecasteaux, along the meridian of 116° , for above 400 miles, with an average breadth of forty miles, and a height varying from 1,000 to 1,500 feet. There are collateral spurs, which, on approaching the 32nd degree of latitude, appear to form extensive parallel chains, and are probably connected with more elevated mountains in the unexplored northern and north-eastern parts of Australia.

Captain Grey says that he discovered two mountain ranges; one, named *Victoria range* (see general map), at the northern extremity of the Darling range, and about thirty miles to the eastward of it, lofty and altogether differing in character from the Darling, which at this point, where its direction is nearly north and south, is called *Moresby's flat-topped range*; and another, apparently thrown off in a westerly direction from the Darling range, about forty miles in length, from north to south, of a bare, sterile, and barren nature, and terminating seaward in Mounts Peron and Leaneur. This ridge is called, after one of the most intelligent gentlemen in the Colonial Department, London, *Gairdner's range*. (See map of Western Australia.) Another ridge, north and east of the preceding, is termed *Herschell's range*; and one farther south is called *Smith's range*.

The Darling range presents the appearance of a mighty forest of magnificent timber, broken only occasionally by a few inviting valleys.

The Darling hills separate the province

into two distinct districts; the one, termed the plain of *Quartania*, situated between the Darling hills and the sea coast, stretching from south to north for about 300 miles, with a breadth of fifteen to twenty miles. This plain is well wooded towards the coast, is in some places low, of a coralline structure, and full of estuaries, lakes, rivers, and streamlets. In other places the limestone formation rises into eminences and hills, parallel to the coast-line, and nearly isolated from the surrounding country. To the northward, towards Champion bay, the country becomes more undulating, and presents some singular ridges.

The district to the eastward of the Darling range, "the country over the hills," may be said to commence at King George's Sound, on the south coast, and run north for 500 miles, over a varied territory, which in some parts has been compared to the county of Herefordshire, in England; in others, to the county Wicklow, in Ireland; and in the more northern parts, in the Toodyay district, to Switzerland. The extent of arable land in this division of the colony is very considerable; so lightly timbered as scarcely to offer any obstruction to the plough; and consists of a loamy soil, well watered, not subject to be materially affected either by heat or wet. The settled portion commences about the latitude of Perth, and extends north from 80 to 100 miles. Some settlers have, however, located themselves 100 miles farther, in a northerly direction.

Owing to the limited number of its settlers, and the serious difficulties with which they have had to contend, Western Australia has been less extensively explored than the sister colonies described in the previous pages, and the knowledge acquired of its physical features is, consequently, yet more fragmentary and imperfect; the difficulty, moreover, of framing a correct though brief general view of the topography of this extensive and really valuable province, is materially increased by the contradictory statements made by different explorers, for, as in the case of the Geraldine district, the same region has been pronounced by one party, of exceeding fertility and beauty; by another, sterile, and absolutely unfit for cultivation. After careful examination of every available source of information, I have succeeded in forming, as it were, a skeleton outline of the coast line and the country at the back, as far as it has been examined;

but the details cannot be filled in, while so much even of this portion remains imperfectly known.

The north-west coast line of Australia has been traced as far as Sharks' bay, in the general description of the island (see p. 382); and the inland features, so far as they were seen by Captain Grey, in 1838, have been also noted (p. 379).

Sharks' Bay (see map of the whole island), in 26° S. lat., is large, of easy access, and affords several safe anchorages. It was discovered by Dampier, on 6th August, 1699, and so named by him, on account of the large number of sharks seen there. A considerable portion of the land adjacent to this extensive inlet is yet unexplored; we continued unacquainted, even with the coast line, and it still seems to me probable (as I stated in my *History of the Colonies*, in 1834-5), that the outlet of a large river will ultimately be found in this neighbourhood.

Gascoigne River, nearly opposite *Bernier island* (see p. 382), and forming the south-western extremity of Sharks' bay, was partially examined by Captain Grey, in 1839: but with few men and a couple of whale-boats, it was impossible for him to determine the character of the country, the extent of the river, or the depth of an adjacent inlet. The manner in which he was preserved through the perils of shipwreck, famine, and thirst, while driven about this wild coast, was truly wonderful. Nothing, as the gallant explorer himself says, could have saved him and his party, but the ever active and present care of Divine Providence. It appears from Captain Grey's examination, that the country to the northward and southward of the Gascoigne is low, covered with mangrove flats, and abounding in sand-banks, presenting, in fact, all the features of the embouchure of a great river. Near the sea-coast is a sandy, scrubby ridge, termed *Lyell's range*, apparently thirty miles in length. The plains beyond were examined for fifteen miles in a north-east direction, and found to consist of salt, mud, and moist sand, devoid of fresh water, and seemingly illimitable, the eye being too much affected by the mirage, to perceive their actual limits.

The Dutch commodore, Vlaming, visited this part of the Australian coast in 1667, found a river, and went up it with three boats, four or five leagues, amongst rocks and shoals; saw much water inland, as if the country were drowned, but no men nor

anything fit for food, and, as was the case with our English explorer, wherever they dug for water, the ground was salt. It is supposed this river may have been the Gascoigne. Vlaming came to another river near the preceding, ascended it for about a league, found it terminated in a round basin, and was entirely salt. The country was destitute of grass and trees. The point of entrance into the river was composed of a very red sand. In the bed of the Gascoigne a fine white sand was found. The northern mouth of the Gascoigne, where entered by Captain Grey, had twelve feet on its bar at low ebb tide; the bar once passed, there are three to three-and-a-half fathoms, in a land-locked creek, which is separated from the sea by a shifting bed of sand and mangrove swamps, termed *Babbage Island*, which forms the northern and southern mouth of the Gascoigne river.

The southern mouth of the Gascoigne (lat 24° 57') is completely free from shoals, and has seven feet of water on the bar at low tide; there is also a channel in it containing never less than this depth of water for about four miles, after which it is only navigable for small boats during the dry season. Large trees (termed *snags*, by the Americans) are firmly planted in the bed of the river, which renders the navigation difficult, especially at high water. In one part of Captain Grey's *Journal* (vol. i. p. 384), he speaks, as before, of the "*northern* mouth of the Gascoigne having a very good passage with twelve feet of water at low ebb tide;" in another part (vol. ii. p. 120), he says, "*the northern* mouth is narrower and more *shoal* than the *southern*." The truth, however, is, as admitted by the frank and intelligent author, his examination was "*hurried and imperfect*," and the opinion above given must be received with caution. The vast masses of drift-wood, the large trees carried across the bay to Dorre island, the gentle slope of the country into the interior, and the immense bed of the portion of the stream seen, indicate the existence of a large river which drains probably a fine region. Plains of a rich reddish loam border the Gascoigne on each side, occasionally broken by low, gently rounded hills, composed of the same description of soil; fresh-water lagoons were found in different places, the country, even in the dry season, was covered with grass, and no termination was seen of the good land, except near the sea.

Immediately to the south of the southern mouth of the Gascoigne, a line of shoals commences at two to four miles from the coast, and runs with scarcely any intermission round the bay, so as to render the approach to this coast almost impracticable. A low spit about twelve miles south of the Gascoigne river, is termed *Point Greenough*, and between this point and the river there is a deep bay, the shores of which are low and thickly studded with mangroves, through which many salt-water creeks run up into the country. Below *Point Greenough*, the shore trends south-and-by-east, preserving its low character, but thickly wooded with mangroves for eight miles, when a remarkable change takes place, the mangroves suddenly cease, and the low range of hills which extend southward along the coast and parallel to the shore, increases a little in height. Within about the distance of a mile, the mangroves recommence, the coast trends south-east for about five miles, then runs south-east-by-east, forming a bay about four miles deep, the bottom of which appears to be lined with mangroves. After passing this bay, the coast runs south-east-and-by-south, the mangroves appear to be less numerous, and the low wooded hills approach nearer to the sea, the low shore is fringed with trees down to the water's edge, forming little green knolls of foliage. Farther south, to the *Hamelin Bay* and *Freycinet Harbour*, in the bottom of *Sharks' bay*, we know nothing certain.

Peron's Peninsula, about 200 feet high, is a barren, sandy table-land, sloping away to the southward.

Dirk Hartog's Island, when seen by Captain Grey, looked exactly like a Scottish heath. There is good shelter for shipping, and adjacent there is a guano island, and a very rich mother-o'-pearl bank.

Steep Point, the western extremity of this portion of Australia, consists of lofty inaccessible limestone cliffs, hollowed into deep caverns by the action of the waves. The coast then trends to the south-east, is very uninviting, and consists of a high range of barren limestone hills, ascending gradually from steep cliffs, which form the coast-line. The outline of these hills is monotonous; they have a barren appearance, and are rent in places by deep rocky gullies, which run down to the sea.

Red Point, the western entrance of *Gantheaume bay*, is a bold circular headland, four miles in extent. To the northward

of this promontory the country has a white sandy appearance; the coast-line consists of low ridges of sand-hills; but inland there are said to be tracts of good pastoral and arable soil, in blocks of six to ten thousand acres—much of a rich alluvial character.

Gantheaume Bay, where the monotony is broken by the appearance of detached hills, although protected at the south end by a reef, has as heavy a surf breaking on it as on any other part of the shore. An inlet here is described by Captain Grey as "one of the most romantic and picturesque estuaries he had yet seen;" its shores abounded with springs, and were bordered by native paths, whilst the trickling springs, flowering shrubs, drooping foliage of several large sorts of casuarina, the number of wild swans on its placid bosom, and the natives fishing in the distance, imparted to the whole scene a quiet and charm to which he had long been a stranger. The mouth of the inlet is protected from the ocean surf by a line of breakers and reefs. There are rich flats on each side of the estuary, which communicates with a deep valley, through which flows a stream called the *Murchison*, after the distinguished geologist of that name.

During an expedition in 1849 from Perth, the explorers found on turning to the south-west along the bed of that stream, that the right bank of the Murchison river had wide grassy flats, the stream forming large pools, some of them more than a mile in length; but with the exception of the flats on each side of the bank, the country is said to be poor and scrubby, destitute of trees, and the hills high and rocky, consisting of red sandstone, those to the west capped with limestone. It is in this neighbourhood that the enormous deposit of galena ore has been found in 1848-9. In some places the Murchison runs through almost perpendicular sandstone cliffs, 200 feet in height, broken at intervals by enormous fissures. It is not yet known whether the embouche of the estuary into which the river disembogues, is navigable from seaward; the estuary is about one-and-a-half miles long, by half-a-mile wide; the tide flows five miles up the stream, when it is obstructed by rapids, above which the river, so far as it has been traced, is a succession of long reaches of water, 100 yards wide, and extensive flats covered with reeds. The river continues from east-north-east, through a more level country, running in a deep channel 80 to 100 yards wide,

bordered by thickets of acacia and cypress. Mr. Burges, who visited the Murchison in 1848, says, "We rode up the river about seventy miles from our camp, and when we turned back the river bed was nearly as large as when we made it, but the water was quite salt." He thinks it would make a very good cattle-station, as there is plenty of summer food along the river, and plenty of winter provender on an extensive limestone range of hills which lie to the northward. There are also a number of large springs along its banks; game abounds. The Murchison is supposed to take its rise in the interior salt marshes. The Murchison valley is backed by some lofty and fantastic-looking hills, giving promise of a fertile region. A total geological change seemed to take place in this neighbourhood; a rock, heretofore unobserved in the south-west portion of Australia, occupied the principal place; with this rock limestone was associated, the springs had a strong sulphureous smell, and the lofty broken character of the distant mountains, give a grand appearance to the scenery.

The country behind Gantheaume bay, proceeding in a south-by-east direction, consists at first of ravines and scrubs, next of elevated sandy downs; thickly clothed with banksia trees; then of open sandy downs; subsequently a rich limestone region occurs, with gently sloping hills and valleys, affording even in April fair feed for sheep and cattle, with springs of water at intervals of every few hundred yards, generally situated at the edge of large clumps of trees. This description of country appears to be continuous in a south-easterly direction; on a southerly course a gravelly treeless table-land was found, in places covered with beds of clay, on which rested ponds of water, occasionally intersected by thick scrub.

According to Captain Grey, a fine fertile country, abounding in grassy valleys, rich plains, picturesque limestone ranges, running streams, and estuaries, stretches between the Murchison and Hutt rivers. It was more thickly peopled than any district previously seen; the native paths were broad and well beaten; the wells, ten to twelve feet deep, were executed in a superior manner, and the dwellings also were of superior construction. This observant traveller says, (vol. 2, p. 14), "It seemed certain that we stood in the richest province of South West Australia, and one which so differs from the other portions of it in its geological characters, in the elevations of its mountains,

which lie close to the sea coast, in the fertility of its soil, and the density of its native population, that we appeared to be moving upon another continent." This region is situated between the parallels of $27^{\circ} 30'$ and $29^{\circ} 30'$: its principal river, the *Hutt*, disembogues into a large estuary. A few miles above the estuary the river separates into two branches, both of which were found running in April, 1839. The other principal streams which drain this district are the *Buller* and the *Murchison*. The entrance of the latter was not found available in December, 1849, for a cargo boat. The valley of the Buller is divided into two equal portions by a granite ridge; the land on the left bank of the eastern branch has been found to be of "a very good grassy description, consisting of a range of granite hills, about ten miles north and south, two miles wide." Water, in pools, and abundance of grass, exists on the eastern branch; further east, high and sandy level plains commence, in an abrupt line of sandstone slopes and hills. The valley is estimated to contain 10,000 acres of good grassy land, and 20,000 of inferior feeding country; the good land much broken into patches by that which is of inferior quality. Timber is scarce.

The *Chapman River* runs in a sandy channel, with small shallow pools; the land on the bank of the stream is indifferent and sandy for about a mile, when it rises into sandstone and granite hills, covered with excellent grass. The land upon its northern branch is not generally good, although some fine patches are to be seen. Mr. Burges thinks there are 30,000 acres of good feeding and well-watered land on the north branch of the Chapman, and 30,000 acres on the south branch, but not so well watered.

In January, 1840, Mr. G. F. Moore, in the colonial schooner *Champion*, endeavoured, but in vain, to find a navigable entrance at the point laid down by Captain Grey as the estuary of the Hutt river. The interior, where any of it could be seen, looked grassy; but the view taken was very limited and hurried. In December, 1849, Lieutenant Helpman, in the colonial schooner *Champion*, examined a boat harbour which he had previously discovered at the south end of the Hutt estuary, and found in the channel, between the reefs, twenty-two feet water; the breadth, from the reef at the entrance to the dry sand beach, which is

very low and shelving, is about 200 yards; and in the middle, for about a quarter of a mile, there is eleven to nine feet water. The entire reef is about three-quarters of a mile long, extending in a north-west direction, about one foot above water, thus keeping the boat harbour clear, which will be found exceedingly useful for coasters drawing seven or eight feet water, or for even much larger vessels in fine weather. Plenty of fresh water is found around by digging one foot deep; fish abound, and may be easily caught from the beach. The ore of the newly-discovered rich mineral district, termed the *Geraldine*, may be shipped from this harbour, to which a good road may be made at an expense of £100.

The *Bowes streamlet*, near the Hutt, contains about 100,000 acres of good sheep country: the bed of the stream being filled with broad-leaved reeds, indicates a supply of water in the dry season. The country around exhibits a metalliferous formation. In October, the small brooks were all running strong, and the grass was then green. The hills are of gneiss, with granite and trap rock; the latter clothed with excellent grass, of various kinds.

The country south of the *Hutt* river was examined during an expedition, in 1847, by Lieutenant Irby and two enterprising gentlemen, Messrs. Gregory, of the Western Australia surveying department, who, on 20th December, crossed the *Chapman* river two or three times, and found the country, at first, scrubby, but afterwards saw several fine patches to the eastward. On a course varying north and east the country was grassy; the soil of decomposed granite; patches of scrubby country occurred, then a good grassy district of about ten miles; clumps of York gum, sandal wood, jam and black wattle, were observed on the hills. Deep grassy valleys extended in a southern direction, and the country appeared to continue good, and well watered. In the north and west, the grassy region extended for at least ten or twelve miles, presenting to view about fifty or sixty thousand acres of sheep pasture, of a fine description.

At the stream called the *Buller*, near *Champion* bay, the country, for a distance of five-and-twenty miles, is bounded by a lofty chain of flat-topped mountains, with so regular an outline as to appear rather the work of nature than of art. Between this range and a ridge nearer to the coast is a large and fertile valley, partially drained,

toward the sea, by another valley—in both rise gently swelling hills and picturesque peaks, wooded in the most romantic manner.

The next position of importance on the coast, and indeed the best anchorage, (excepting among the *Abrolhos*), between *Sharks' bay* and *Gage* roads, (at the entrance of *Swan River*), is termed—

Champion Bay, situated in 28° 47' S. lat., and 1° 9' 20" W. of *Swan River*. The roadstead is sheltered from the south-west by *Point Moore*; but a heavy surf occasionally rolls on the beach, extending from the bottom of the bay to the northward, so as to prevent boats landing, unless a jetty, of ninety feet in extent, were run out into twelve feet water. A road has been formed from the *Geraldine* mines to the bay, where a government station, with a few soldiers, has been established, for the protection of those engaged in mining operations. Public attention is now directed to this neighbourhood; and some details respecting the surrounding country, so far as is known, are necessary.

The most remarkable inland features are the *Menai hills*, a group at the north end of *Moresby's* flat-topped range, *Mount Fairfax*, and the *Wizard Peak*, or *Hill*, which is an almost solitary pyramidal hill, of 715 feet elevation, distant eleven miles from *Champion* bay. It is composed of large blocks of ironstone, which have such a powerful effect on the needle, as to change its direction, in different places, ten degrees. A few small casuarinas and wattles are thinly scattered on its summit, and some stunted xanthoreas on the south-west side. Stokes says, that part of the range lying immediately north was absolutely a mass of bare ironstone.

Mount Fairfax, 582 feet above the sea, is the southern and most elevated part of *Moresby's* flat-topped range. It rests on a reddish, sandy, sloping plain, occasionally scattered with fragments of quartz and ironstone, which apparently characterize the formation of *Mount Fairfax*, and the neighbouring heights.

The outline of *Moresby's* flat-topped range, in 28° 50' S., presents a remarkable similarity to *Sea range*, near the *Victoria* river, on the north-west coast, lat. 15° 20' S., and to *Cape Bedford*, on the north-east coast, lat. 15° 10' S. The drawings of these ranges given by Captain Stokes (vol. ii., p. 142), present a striking resemblance to each other, in their contour as well as elevation. The view from the summit of *Wizard* peak is

very commanding: to the north-north-west and north-east lie extensive valleys, concerning whose capabilities very different opinions have been expressed. To Captain Stokes (who viewed them through his telescope), they all appeared of a similarly arid nature. For a few miles to the eastward, and a great many to the northward, the formation of the country is considered by this authority to be of the same flat, broken, and irregular character, including no greater elevations than the Wizard peak, while to seaward, the appearance of the country was that of an undulating plain, with patches of stunted woodland, widely scattered. Mr. Bynoe, an intelligent naturalist, who accompanied Captain Stokes, conceived a like impression of the comparatively sterile nature of the country: he says, it was only the surface soil which held vegetable matter; that near the Wizard peak, the holes dug by the natives to obtain the warran, or native yam, disclosed pure sand; and that near Moresby's range, the soil became freely mixed with ironstones and pebbles—the vegetation more stunted, consisting principally of prickly bush, mingled with coarse brown grass, on which few kangaroos or emus were seen.

On the other hand, the Honourable George Fletcher Moore, who was my fellow-student at Trinity college, in days of yore, and who there distinguished himself by high attainments, and whose quiet, observant character was not likely to give expression to a hastily-conceived or exaggerated opinion, thus speaks of the country near Champion bay:—"Judging by the eye, at that distance, the entire space, as far as we had an opportunity of seeing, after going a little way back from the coast, on the slope to the hills, upon the hills, among the hills, beyond the hills, and, in short, everywhere as far as the eye could discern, appeared a grassy country, thinly sprinkled with some low trees or shrubs, perhaps acacias. If this be the case, and there be water sufficient, of which there is no reason to doubt, this may certainly turn out to be the finest district for sheep pasture that this colony can possess."

Since the foregoing was written, I have received from several quarters details of explorations and examinations of the country to the northward and eastward of Champion bay, which fully substantiate these views, as well as those expressed by Captain Grey. Mr. Gregory, also, who ascended the Wizard

Peak, in 1848, gives an idea of the country totally different from that expressed by Captain Stokes; he says, in his journal:—

"After an hour's ride over rich grassy hills, reached the foot of Wizard's peak; here we left our horses and ascended the hill; arrived at the summit, to our great surprise, instead of the scrubby and sterile country described by Captain Stokes, of the *Beagle*, beautifully grassy hills stretching from north-north-east met our view to the extent of about 20,000 acres; had it not been for certain bearings to Mount Fairfax and other hills, that we were on Wizard peak, I should have suspected its identity. Leaving Wizard peak and steering north along the western foot of the grassy range; the country to the east consists of grassy hills of limestone, rich in fossils of wood and shells, with an occasional granite hill producing coarse grass or short scrub."

The *Greenough River*, which flows into Champion bay, was examined, in 1848, by the Messrs. Gregory and Burges, and found, near the sea, bounded by white and red sandstone cliffs 200 feet in height, and generally covered with dense thickets of acacia growing on an otherwise barren and stony soil. One channel was found dry, with no appearance of water having passed over its sandy bed during the previous winter; as the river was traced upwards, in a *southerly* direction (see map), it was found to improve, and was joined by a small gully from the west coming through a grassy valley. The explorers, on altering their course to 210 degrees, found the country improve, the river running, with many large pools of water, some more than half-a-mile long, and 80 to 100 yards wide; the water from sandstone springs slightly brackish. It is estimated that there are 50,000 acres on the Greenough well grassed and watered.

The embouche of the Greenough river is a small estuary separated from the sea by a low bank of sand, thirty-five feet wide and five feet high, over which the sea, during gales, appears to enter. The banks of the Greenough are, in some places, seventy feet high, composed of limestone.

Mr. Roe, the surveyor-general of Western Australia, found, in June, 1847, to the north-east of Champion bay, a tract of about 150 miles of good arable land, one-third of which he considered excellent for every purpose, either agricultural or pastoral. He states, however, that he did not find quite so much good country as Captain Grey's book would have led him to suppose.

Proceeding southward, we arrive at *Port Grey*, which is five miles to the southward of Point Moore. The shore between is rocky, with outlying reefs. There is

an extensive reef running from Point Moore, and one to the north from Point Grey, and a centre one, leaving a clear opening on each side. The port is exposed to southerly winds, but there is "a very snug little harbour formed by the reef, extending from the land in the depth of the bay." There are two and-a-half fathoms smooth water close to the reef, and the point of this natural jetty shuts in with Point Grey, bearing south-by-east, "so that no wind could hurt." There is fresh water close to the harbour, which seems to be adapted for small coasters.

Before proceeding further with the coast line, it is advisable to examine *Houtman's Abrolhos*, distant thirty-five miles from the mainland, in $32^{\circ} 42' 50''$ S. lat., and $1^{\circ} 57' 50''$ W. of Swan River. They form three separate groups of coralline islands and reefs, which extend in a north-north-west direction forty-eight miles, diminishing in breadth towards the north. They are termed the *Northern*, *Easter*, and *Pelsart* group, and are separated by channels four to ten miles wide.

Easter group (the central) contains a large and secure haven, termed *Good Friday harbour*, having fifteen to seventeen fathoms, fine muddy, sandy bottom, between the coral patches, which demand the utmost attention from the navigator in entering the harbour.

Rat Island, the centre of the group, has an elevation of about thirteen feet, and has low overhanging cream-coloured limestone cliffs. The soil is mixed with guano, and filled with burrows of the sooty petrel or mutton bird. The island is infested with rats, and there are numbers of a pretty lizard, whose tail is covered with spines.

The Abrolhos form the upper surface of the great coral-bank, which extends from the mainland, and shelves off at the outer edge of the south part of the group, almost precipitously to no bottom, where soundings are not found with 250 fathoms line. The average depth surrounding the islands is twenty to thirty fathoms. With the exception of the Bermudas, these coral islands, so far as we know, are the farthest distant coral formation from the equator. The reef on which Rat island rests extends off 400 yards on the inner side, and has twelve fathoms just off it on a grey sandy mud. The greater portion is composed of a variety

of corals, intermixed and forming a consolidated mass with "brain-stones" scattered over it. The reef is nearly dry at low water; but a portion does not rise so high, and projects so as to form a narrow shelf, from the edge of which a wall descends almost perpendicular to the depth of fifty-four feet. The coral on the upper twenty feet is formed in the shape of huge fans, spreading out from stout stems, overlapping each other in clusters, and having angular cavities between. The lower portion of the wall is of the common branch kind.

The *Wallabi Islands* form part of the Abrolhos group, and have a good haven, termed *Recruit harbour*, with eleven to twelve fathoms, perfectly sheltered on all sides. East Wallabi island has an elevation at the north-east extremity of fifty feet, and measures upwards of a mile each way. West Wallabi island is two miles and-a-half long, by one mile broad; in the centre is a low flat, with hills rising all round except on the south side. *Flaghill*, the highest, is formed of sand and comminated shells, while the flat which stretches to the south-west from its foot, is of limestone formation, on which there is a cavern fifteen feet deep, with a sloping entrance and a stalactite roof. Some sand hills, thirty feet high, and covered with a dense scrub, are filled with the burrows of the mutton bird. The north end of the island is a level stony flat, with patches of brushwood, among which Captain Stokes found such an abundance of the marsupial animal, termed the Wallabi, that in four hours, seventy-six, weighing about seven pounds each, were killed with three guns. It is strange how these animals reached the islets from the main. The snapper fish were numerous off the island, and so voracious that they allowed themselves to be taken with a small piece of paper for a bait.

Gun Island, in $28^{\circ} 53' 10''$ S. lat., $1^{\circ} 53' 35''$ west of Swan river, forms the north-west extreme of the Pelsart group, and is the largest of the islets (a quarter-of-a-mile long). The group is encircled by a reef; on which doubtless the Dutch ship *Zeeuyk* was wrecked in 1727. The island was so named by Captain Stokes, in consequence of finding on it, 24th April, 1840, a brass four-pounder of singular construction, which is now deposited in the United Service Museum, Scotland-yard, London. The gilding on the ornamental brass-work is in a remarkable state of preservation. Two Dutch doits were found, bearing date 1707

* This is the position of the observation spot of Captain Stokes on *Rat Island*

and 1720; also a number of pipes and glass bottles; the latter of a stout Dutch build, some capable of holding five or six gallons; they were placed in rows, half buried in the sand, as if for the purpose of collecting water, and were covered with a white substance, which had eaten away the glaze.

Resuming now an examination of the coast to the south of Champion bay, it appears, for at least thirty miles, as seen from the deck of H.M.S. *Beagle*, to consist of high sand hills, partly covered with vegetation; immediately in the rear is a range rather higher and of a less barren appearance; behind these again, at a distance of eight or nine miles, there arises a series of singular table-topped broken ridges.

The *Irwin River* falls into the sea midway between Champion bay and the Arrowsmith; it rises in the interior to the eastward, and has in some places a bed eighty yards wide, with limestone and clay banks, thirty feet high; but in the dry season water is only to be found in pools. The valley of the Irwin is said to extend thirty miles north-north-west and south-south-east, and is about eight miles wide. On an east-north-east course from Champion bay, there are extensive flats of good light soil, well grassed, and some two miles wide; a beautiful country, full of warren-holes, and lightly timbered; several good pools, "one 200 yards by 25, and no bottom to be found by diving." A fine wide grassy flat, with small trees, continues to 29° 9' S. lat. Advancing thence in a north-east course, the country much improves; banks of clay and red sandstone occur; but on approaching the *Coal Valley* in 29° 57' 42" S. lat. (200 miles north of Perth) there are no flats but steep banks to the river bed, with plenty of good water by digging a few inches, and abundance of grass. The river bed twenty-five yards wide, running through sandstones and shales. The coal seam seen here was about six feet thick, and ran entirely across the bed of the river, and under the bank on both sides. The Irwin divides into two branches, where the sandstone ceases, and the granite formation commences; the largest stream flows from the eastward.

Mr. Macgill, an officer of her Majesty's 96th (who was afterwards unfortunately lost), made, in company with others, in 1847, a journey from Lefroy's station, on the *Moore* or *Garban river*, to Port Grey; he found the country (probably he kept near the coast), for the greater part of the way,

wretched and unproductive; the party were two days without water; but the Irwin valley he describes as a "terrestrial paradise," in breadth from one to six miles, and extending, at all events, from twenty-five miles inland down to the coast.

The *Arrowsmith River*, or rather brook, has its embouche in the sea, to the north of Gairdner's range, and its rise to the north-east, in the Herschel range. The pasture-lands on the Irwin join those on the Arrowsmith; the country is said to be better adapted for cattle than for sheep, as parts of it are rather low; for agriculture it would be useful, as the soil is rich, and there is scarcely a tree to each hundred acres. There are about 10,000 acres of fine rich pasture land along the banks of the Arrowsmith, reaching within two miles of the sea, which would make a superior summer run for a large herd of cattle. Ten thousand sheep could be kept between the Eastern Irwin and the Arrowsmith, but the occupiers would probably have to dig for water. Whether the river and country is identical with that named by Captain Grey, is uncertain.

The country between the Arrowsmith and *Moore river*, crossing the streamlets of Hill and Smith, behind the ranges, consist of extensive plains, which, at least, during the rainy season, are well grassed.

The *Hill* stream flows from the south end of Gairdner's range.

The *Garban* is formed by the junction of the *Moore* and *Norcott* rivers, about fifty miles north of Perth. From the Garban to Perth, there is a chain of fresh-water lakes, at intervals of five or six miles apart.

The coast line presents no feature of note; harbours for cargo boats probably exist at *Island Point*, *Jurien Bay*, *Lancelin Island*, and behind the reefs at and near *Breton Bay*. The appearance of the shore is barren and forbidding, but the wind seldom blows direct on the land; vessels can therefore run north or south, according to circumstances.

Approaching the Swan-river estuary, we reach *Rottneest* (rats' nest) *Island*, distant twelve miles from the port of Fremantle; it is ten miles long by seven wide, heavily timbered, principally by the cypress, and bounded for nearly its entire circumference by limestone rocks, so as to present few landing-places for boats. This island is the prison where the aborigines of Western Australia were transported, for offences com-

mitted in the colony. From a gently rising ground near the superintendent's house, the view is enclosed on every side by a chain of hills which slope gradually down into the plain, occupied by a succession of lakes, the largest two miles in circumference, and one yielding pure salt in abundance. The aborigines, about twenty in number, under the direction of their superintendent, Mr. Vincent, and with the aid of four soldiers, have built an excellent dwelling-house, store (70 feet long), cells for prisoners, workshop, stable, &c.—all of stone; made a road, ploughed, fenced, and cultivated a considerable quantity of land, and done much useful work. This establishment is now broken up, and the island leased to Mr. Thompson. The convict aborigines are employed on the roads. The salt lake is a short distance from the house of the superintendent; it is about three-fourths of a mile in circumference, and is nearly covered with beautiful crystals of dazzling white salt, of which many tons are collected in a month. The water of this lake might, in American language, be termed a "concentrated essence of sublimated salt;" it is so intensely acrid, as to blister the tongue when tasted. Mr. Deputy Assistant-commissary Webb, who explored the island, was pleased with the scenery; the soil is of a light sandy loam; in some places there is a rich dark brown mould prized for gardens.

The *Swan River*, which originally gave its name to this colony, takes its rise about 80 miles from the coast, flows north for 100 miles under the name of the *Avon*, then joining the *Toodyay* turns west, passes through the hills for fifty miles, and disembogues into the *Perth water*, an estuary about two miles long by one broad, which communicates with the beautiful lake termed Melville water, seven miles long by four broad. The Swan flows all the year round, and sometimes renders the waters fresh in Gage roads during winter; together with the Perth water, it is navigable for boats or flat-bottomed craft, as far as the tide flows, viz., about forty miles.

The *Canning*, which flows from the south-east to Melville water, has a boat navigation for fifteen miles. The *Helena* falls into the Swan below Guildford.

The Swan river is subject, like other Australian rivers, to occasional, sudden, and tremendous floods, which inundate the corn lands in the vicinity. The early settlers, un-

aware of this fact, selected a low-lying site for their town; but the first winter, fortunately, gave them a warning to choose a more elevated and safer position.

Melville water, close to which the capital of Western Australia is situated, opens into Freshwater bay, and the latter into Rocky bay, from which the estuary continues in smaller reaches until it opens into the sea at Gage roads, where the town of Fremantle is situated. The portion of the bar from Fremantle to Rocky bay, is full of shallows, on which there are only nine to ten feet water; but the estuaries of Rocky and Freshwater bays, and of Melville, have sufficient depth of water for the largest ships, and would form a fine harbour, if accessible from the sea. In my *Colonial Library*, vol. iii. p. 328, published in 1836, I urged the cutting of a canal, so as to admit large vessels. The bar at Fremantle, which extends three-fourths of a mile, not long since was blown up, so as to admit craft of eight feet draught to reach Perth; and it is now proposed to cut a ship canal from Rocky bay to the sea, through an isthmus of soft calcareous sandstone 480 yards in breadth, with an average height of fifteen feet. If this be done, and the mouth kept free from sand, Western Australia will possess a most complete land-locked harbour.

The cliffs of the coast near Swan river appear covered with thousands of roots, twisted together in a reticulated manner. The same formation is observable at Bald Head, King George's Sound. Their resemblance to the stumps of a dead shrubbery is so exact, that, before touching them, it is difficult to say which is the wood and which the calcareous matter. Mr. Darwin supposes that this singular appearance has been caused by the wind heaping up calcareous sand, together with branches, roots of trees, and land shells; the whole being subsequently consolidated; and when the fibrous portion decayed, lime, washed into the cylindrical cavities by the action of rain-water, preserved the form of the wood. The decaying influence of the weather is now washing away the sandstone and softer portions of the rock, leaving the vegetative forms in their primitive state.

Gage Roads, at the entrance of Swan river, are formed by Garden, Rottneest, Peel's, and Carnac islands; and the anchorage is protected from the vast body of water which rolls in from the north-west by a bank, which ex-

tends out to the north-east, between Rott-nest island and the main. The anchorage is in seven or eight fathoms, on sandy mud, about a mile from the gaol at Fremantle,* bearing east by north. A quarter of a mile nearer the shore, the bottom shoals rapidly to four and three fathoms, on rocky ground slightly coated with sand. A ship rightly found—especially with Honiball's patent moveable fluke anchors—would not drag up so steep a bank; and Captain Stokes thinks that the cause of some ships being driven on shore has been owing to not selecting a proper berth, and getting too near the land, on a rocky ground; so that, when a breeze sprung up, there was no time to let go another anchor with effect.

Owen's Anchorage, the usual resort from the 1st of May to the 1st of September, is perfectly secure, and readily accessible from Gage roads.

Cockburn Sound, in $32^{\circ} 10'$ S. lat., formed between Garden island and the main land, seven miles from Fremantle, is a safe and extensive anchorage. It would contain 1,000 ships, out of mortar range either from the sea or land side, and in the hands of an enemy would be exceedingly injurious to our maritime interests, especially in the Indian Ocean. H.M.S. *Beagle* rode out two gales, of forty-eight hours' duration, here, on the 31st of March and the 11th of June. The gales commenced at north by west, and, after lasting forty-eight hours, gradually blew themselves out at west-south-west. At the anchorage there was not more sea than a boat might have endured.

Rockingham Harbour is said to be a good haven, requiring only a small breakwater, for shelter against the north-by-west winds, which are of rare occurrence. The deep water runs within a few yards of the shore, and a jetty would enable large ships to discharge their cargoes.

Warnborough Sound, three miles from north to south, and two miles and-a-half from east to west, is formed by a chain of reefs; the entrance-bar has five or six fathoms water on it.

Safety Bay, an inlet of Warnborough Sound, is about thirty miles south of Fremantle. The mouth of the inlet has a tendency to fill up with sand, which a small expense in piling would prevent. If this were done, a light-house erected, and the entrance buoyed, an Indiaman, it is

* The longitude of Scott's jetty at the Swan River is considered to be $115^{\circ} 47'$ E. of Greenwich.

said, might discharge her cargo by means of a plank to the shore.

Peel Harbour, forty-five miles south of Fremantle, has a narrow entrance. The estuary is in length about fifteen miles, by two to four miles in breadth, and eight feet deep. Inside there appears to be sufficient depth of water and space to hold many vessels.

The *Murray River*, which is navigable for sixteen miles by boats, disembogues at the centre of Peel inlet; and the *Serpentine*, *Currie*, and *Dandalup* streams flow into the broader part of the estuary. The *Dandalup* joins the *Murray*. The *Harvey* flows into the head of the inlet.

Leschenault or Koombana Bay, in Wellington county, eighty miles south of Swan river, ninety-eight miles from Perth by land, and 180 miles from King George's Sound, has the mouth of its inlet situated in lat. $33^{\circ} 19' 10''$ S., long. $115^{\circ} 40' 15''$ E. The bay affords shelter for large ships in four and-a-half to five fathoms, excepting from north by east to west, and by north or west-north-west winds, or for smaller vessels lying further in, round to north-west; but as the bottom is clear of rocks, and there is good holding-ground, vessels have been uninjured during the heaviest gales. *Mount William*, bearing N. $40^{\circ} 6'$ E., from near the entrance of the bay, distant thirty-three miles, and with an elevation of 1,725 feet, is the best land-mark. *Mount Leonard*, another elevation of the Darling range, bears S. $81^{\circ} 44'$ E.; distant thirteen miles; elevation, 1,270 feet.† The *Leschenault* inlet, or estuary, at the south-west of *Koombana* bay, is separated from the ocean by a narrow limestone ridge, covered with timber and vegetation, and has a well-protected entrance. The estuary is about fourteen miles long, by upwards of a mile broad; in some parts, three to six fathoms deep; affording in all places water communication, as it is full to the shore edge. There is a sand-bar, easily removable, dividing the estuary from the bay; boats drawing three to four feet water can pass it at all times. Rise of tide inconsiderable.

The *Preston* and *Collie Rivers* have their embouche on the east side of the inlet; and the *Brunswick* falls into the *Collie*, a little above its embouchure. These rivers are running streams all the year round, skirted

† *Stokes' Voyage in H.M.S. Beagle*. Vol.ii., p.396. Roe's Chart gives the height of *Mount William* 3,600 ft.

by rich pastures, and remarkable for the beauty of the scenery around.

At Leschenault, the Darling range approaches within fourteen miles of the sea; its sharply-pencilled outline broken only by Mount Leonard and the gorge through which the Harvey river flows.

Australind is situated on the easternmost border of the Leschenault estuary. It is, beyond all comparison, the best planned town in the colony; and Mr. M. Waller Clifton deserves great credit for the ability and taste which he has manifested. A substantial bridge has been constructed over the Brunswick river, in the township: it is 160 feet long, by 10 feet wide; the span of the four chief arches is 27 feet; it is supported on five piers, of which three are in 12 to 16 feet water.

Bunbury, at the southernmost part of the bay, is beautifully situated on a small high peninsula, lined on the south by basaltic pillars. The town is on an height; all the streets cross each other at right angles; and the neighbouring country is very pretty. The harbour is secure for small craft; but large vessels lie in the roadstead, to take in long timber. On the sea shore, near Bunbury, there is a formation of pure basaltic rocks, resembling, in miniature, the celebrated Giant's Causeway in Ireland. The columns, as seen in the chasms caused by the action of the sea, are, in some places, six feet high, and beautifully shaped. The district between Bunbury and Geographe bay (Henty's Plains) is one of the richest in the province.

Geographe Bay forms a complete curve. Vasse inlet, in the south-east portion of the bay, affords shelter for small craft. There is good anchorage, protected from north-west and south-west winds, on the north-east side of *Cape Naturaliste*, (which is in 33° 31' 45" S., 0° 47' 30" W. of Swan river), the westernmost point of the bay. The township in Geographe bay is named Busselton, situated on the Vasse river, 130 miles south of Perth. The most conspicuous feature is a neat stone-built church, recently erected, of which a drawing was given in the *Illustrated London News* of 21st February, 1846. The nave is 40 by 20 feet; the chancel, 14 by 12 feet; the walls 16 to the line of roof; the roof is constructed of native mahogany, with principals, purlines, &c. Thus at a place, of which the name and position are almost unknown in the mother country, Englishmen have erected

this stately fane, almost in the heart of a wilderness.

The *Vasse River* is said to "flow through a district rich in herbage, resembling clover, and enamelled with daisies, buttercups, marigolds, and other beautiful field flowers."*

The north extreme of *Cape Naturaliste* is formed of majestic cliffs of limestone, 200 feet high, and perforated with two ranges of caverns. The outer, or great cavern, is about 50 feet wide, 45 high, and 100 feet deep. Some of the stalactites measure 15 feet. The sides and roof present an extraordinary assemblage of colours, owing to the variety of liverwort and fungi with which they are covered. From *Cape Naturaliste* to *Cape Hamelin* the coast lies nearly due south, marked only by the *Margaret* river, which has its mouth almost midway between the two capes. The most striking sea-coast feature is a belt of snow-white sand, of some hundred yards in width.

Cape Leeuwin, or *Landt Van de Leeuwin*, the headland so called by its discoverer, in 1622, is situated at the south-west extremity of Australia, lat. 34° 21' S., long. 115° 6' E.: it is tolerably elevated, of a smooth but sterile aspect, visible about thirty miles in fine weather, and defended, between south-west and south-east, by rocky islets or detached breakers, to the extent of five or six miles. It appears like an island, lying close to the main, with lower land on its north side. Soundings do not extend far off shore. Flinders found eighty-five fathoms, at nine to ten leagues south by west, and forty to sixty fathoms, at six leagues to the south of the Cape. South-west gales, with a heavy sea, are experienced off this cape. H.M.S. *Zebra* was compelled to throw her guns overboard. I was myself, on one occasion, in a constant gale for nearly three weeks, running from north to south, without being able to make any westing to double the Leeuwin. There appears to be a northerly current setting round the Cape from the westward; but an easterly current generally sets along the southern shores, towards Bass' straits. A settlement was formed to the south-east of the Leeuwin, at a small harbour towards *Augusta*. It was abandoned, on account of the alleged insecurity of the haven. The anchorage is spacious, sheltered from the usual winter winds from the north and north-west, but open to those which blow from south and south-east.

* *Western Australia*, by T. J. Buckton, Esq.: p. 39. London: 1840.

The *Chapman* river, after its junction with the *Blackwood* river, flows into Augusta bay or inlet, under the designation of M'Leod creek. It is navigable for boats in a northerly, and then in a westerly direction, for twenty-five miles.

The *Blackwood* river has been traced fifty miles previous to its junction with the *Chapman*; its banks are stated to be, in many places, covered with a dense forest of enormous trees, and some of the finest land seen by Sir J. Stirling was observed in its vicinity. The country was partially examined, a few years ago, by Mr. J. C. Russell. At first, the timber was of minor growth, and as thick as usual: after advancing four miles, the country improved; the "face of nature became more and more pleasing; the soil a rich red loam." On a southerly course the country deteriorated; but, on bearing west, the explorer "came upon a brook, surrounded with magnificent gum trees, the scenery very beautiful, with banks sloping down to the water." Much of the country seen was "exceedingly fertile, but greatly encumbered with timber of stupendous size." There were some grassy plains, and the region is well watered.

Proceeding eastward from Cape Leeuwin the coast trends to the north-east, and forms an open roadstead termed *Flinders' Bay*, which curves south forty-three, east thirty-seven miles, along a low, sandy, uninviting shore to *Point D'Entrecasteaux*, a remarkable cape in $34^{\circ} 52'$ S. lat., $116^{\circ} 1'$ E. long, visible thirty miles from the deck of a ship. The next prominent point, *Cape Chatham*, is a steep rocky island, lying a mile from a cliffy projection on the main, lat. $35^{\circ} 24'$ S., long. $116^{\circ} 29'$ E.

Point Nuyts, seven miles east by south from Cape Chatham, is a cliffy head, projecting three miles beyond the line of coast.

It is known that *Nornalup* and the *Deep River District* possess a very fine country; timber of the most stupendous size, and of the best quality, is found in this neighbourhood. A seven ton vessel was built of one piece of thirty feet, cut off the butt of a tree of 150 feet high before branching.

This region is not sufficiently known to enable me to give any description of it; it appears, however, very probable, from what I saw of the coast-line, that a good country, with certainly a fine climate, will be found in the interior; the shore abounds in inlets capable of being made valuable. *Irwin Inlet*, *William's Bay*, and *Torbay*, possibly possess

good havens. *Mariet Lake*, near Ratcliffe bay, is a large sheet of water. The whole of this coast and country ought to be carefully surveyed and explored.

King George's Sound, the best harbour in Western Australia, is formed on the south side by *Bald Head*, and defended at its entrance by *Breaksea*, *Michaelmas*, and other islands, which protect the sound from easterly winds. There are two havens called *Princess Royal* and *Oyster harbours*, the former adapted for large ships, the latter for vessels not drawing more than eleven feet of water, which may be secured within 100 yards of the shore. For a ship only wanting water and fuel there is a sandy bay in the south-west corner of the sound, where two or three streams of excellent water run into the sea over the land.

Bald Head, which forms the south-west portion of the sound, is a barren rock of moderate elevation, about two miles and-a-half in length; it is connected with the main by a low piece of land, in the centre of which stands a small peak; this gives the head from the offing to the southward the appearance of an island. The conspicuous headland, called *Peaked Hill*, with a peculiar profile outline, is about five miles to the south-west of Bald Head, whose south end is in $34^{\circ} 55'$ S. lat., $118^{\circ} 29'$ E. long.

From the anchorage of *Princess Royal harbour*, situated at the back or west part of King George's sound, *Mount Clarence* bears north-north-east, and the south end of *Michaelmas Island* just open off *Point Possession*. Stokes says that the entrance to this great basin is by a narrow channel in the north-east corner; the chief impediment being a long spit extending off the inner west entrance; it was worked through by H.M.S. *Beagle* both ways; inside there is water sufficient for a line-of-battle ship, but only for a limited space, a short distance within the entrance towards the north-west corner of the harbour, where a straggling village points out the township of *Albany*. Mount Clarence and Melville rear their bare and granitic heads on either side, and huge fantastically-shaped boulders are strewn over their slopes.

The *Kalgan*, or *French River*, which disembogues into *Oyster harbour*, flows north from the *Stirling range*, is of considerable length, and fed by many tributaries. Excursions were made up the stream in 1831 by Dr. Collie and Lieutenant Dale, who for the first twenty miles of their route found dense forests of "mahogany," white gum

trees, casuarinas, banksias, wattles, (always indicating in Western Australia a good soil,) and other shrubs; ascending the stream the country became more open, and numerous ponds of brackish water were found.

About thirty-five miles north-west from King George's Sound, there is a fine country, resembling in its park-like features the neighbourhood of Melbourne, Port Phillip. There is an abundance of kangaroos, which indicates the pastoral character of the neighbourhood.

The *Hay river*, at two miles above Ungerup, is a small tortuous rivulet, with rich grassy banks, overhung by fine shady trees. The valley is narrow, sloping gently upon either side, and its soil is a fertile mould. Lady Spencer (whose husband was, for some time, Government Resident at King George's Sound), has some fine farms in this region. The crops of grain produced here are equal in quantity and quality to those of the most favoured districts in Van Diemen's island.

The district of King George's Sound is not subject to droughts, the harbour is almost unrivalled, and the adjacent seas, bays, and inlets abound with whales and excellent fish of various kinds.

Albany, which is still a mere village, is distant from Perth by land 300 miles, and by sea 450 miles; from Adelaide, South Australia, 1,400 miles; from Melbourne, Victoria, 1,800 miles; from Van Diemen's island, 1,850; and from Sydney, New South Wales, 2,700 miles.

The coast trends to the north-east from King George's Sound, and presents several bays and inlets; the principal, *Doubtful Island Bay*, is formed on the south side by *Point Hood* and the *Doubtful islands*; it is about six leagues across to the north shore, and about ten miles deep, affording shelter in its south-west part from all winds that do not blow hard between north-north-east and east. The north and west shores have not been closely examined; the coal seam, which extends in a southerly direction from the Irwin river, Champion bay, is supposed to be continued to this bay, as coal is found cropping out near the water's edge.

From *Doubtful Island Bay* the coast becomes low and sandy; trending in an easterly direction to the maritime portion of the province of South Australia. Mr. Eyre, during his adventurous and disastrous journey from the head of the Great Australian Bight to King George's Sound, found the country improve as he proceeded through

the territories of Western Australia; tracts of better soil, and water-courses appearing to have an outlet to the ocean, rendered the country one of great interest, but the reduced and worn-out condition of himself and his horses, prevented his examining satisfactorily the character of the region he was traversing; he was therefore unable to determine whether the rivers (which appeared to have but a short course) had or had not their embouchure open to the sea.

COUNTIES.—Having completed so far as is practicable an examination of the coast-line of Western Australia, its havens, inlets, and rivers, I proceed to shew the leading features of the counties into which it is divided, whose names, position, and relative area are indicated on the map.

From the smallness of the population, Western Australia has been, as I have before stated, far less extensively surveyed and explored than the sister colonies; it is, therefore, not possible to give a detailed description of the counties which it comprises, the larger portion of which are still unsettled.

Perth County, which contains *Perth*, the capital of the province, and *Fremantle*, the principal sea-port, may be considered as exemplifying the general character of the sea-coast, counties of Melbourne, Twiss, Murray, and Wellington. The Darling range rises abruptly from the plain of Quaran-tania, about twenty miles inland, and consists of rugged round-topped hills of rock and gravel, with valleys of a rather better quality, occasionally affording favourable spots for culture. The whole is extensively covered by an eucalyptus forest of good timber, adapted either for the construction of ships and other buildings, or for domestic purposes. The Swan and other streams by which Perth county is irrigated, have been before mentioned, beside which there are numerous fresh-water lakes and swamps, the soil on whose banks is of great richness. Several of these having been drained and cultivated, produce luxuriant crops of fruits and vegetables, maize, &c.

Generally speaking, however, the aspect of this county is discouraging to the farmer. On arriving the prospect from the sea naturally gives rise to the exclamation—"Sand! sand! is there nothing but sand?" Little evidence of active life or prosperous industry greets the anxious eye of the immigrant, save in the towns of Fremantle and Perth, and the craft on the river. For twelve miles inland he does not see a farm.

Looking back from the top of Greenmount (the first hill of the range on the road to York) the eye wanders over an apparently unbroken forest plain, the great height of the trees effectually concealing all signs of farms or houses. The first view of Perth is however singularly pleasing. Situated about eleven miles from the sea-coast, on the bank of the pretty sheet of water (formed by the Swan river) which bears its name; with the wooded shores opposite; the forest plain stretches away to the east; and the "range" rises in the distance; while the air, although so clear as to render the very stems on the trees distinctly perceptible, has yet all the charm of the soft haze, the many tinted lights and shades of a semi-tropical climate.

Gazing on this tranquil panorama from the top of Mount Eliza, the English immigrant views with surprise in the gardens lying between the cliff and the estuary, the banana, peach, nectarine, apple, and pear, the lemon, orange, guava, loquat, and pomegranate, the almond, fig, and mulberry, while the melon and its fellows creep among their stems; but yet more pleasing is the effect of the endless interlacing of trellised vines beneath which the people are pursuing their avocations, and the successive terraces of vines and olives, rising almost to his feet; yet the question, Where are the farms? still remains unanswered.

A resident of several years' standing assures me that men frequently visit the colony, who having seen nothing beyond this, leave it with a very false impression, forgetting how unfair it is to judge by one limited tract, of the whole of so extensive a territory as Western Australia. In this county the farms are almost wholly confined to the banks of the rivers and lakes.

The position of Perth is well chosen, not only on account of its beauty, but for the more solid advantages which it possesses. The sandy soil, united to an unlimited supply of good water, procured at an average depth of fifteen feet, a perfect drainage in each direction, exposure to the healthful sea-breeze sweeping up the succession of picturesque estuaries, with a frontage and rear of garden-grounds, offer great promise of salubrity, while an abundance of brick-clay, lime, fire-wood, and timber of good quality have afforded the materials for a substantial style of building. Nor have these facilities been unavailed of by the

settlers. Up to the year 1838, we learn from the journal of the Agricultural and Horticultural Society of Western Australia that the value of the improvements in Perth were estimated at £50,000, since which time the increase has been considerable. The building allotments have likewise materially augmented in value; fifteen years ago they were often bought and sold for a bottle of grog, now many are worth from £500 to £1,000; it must, however, be remembered that *then* high and tough gum trees covered the site of the city, and from the thickness of the "bush" it was dangerous to move about even for a short distance;—*now* there is a regular town, excellent houses of brick and stone, with large verandahs and neat gardens around; a store which cost £3,000—temples of worship for different denominations of Christians, a Government-house, Court-house, Western Australian bank, barracks, gaol, club-house, hospital, magazine, public offices, hotels, inns, mills, fields, gardens, good roads, farms and homesteads in various directions.

The military barracks at Perth occupy a pretty situation, about 400 yards from the river Swan (here nearly a mile wide), and at the head of the government square, which slopes gently towards the water. From the barracks there is an uninterrupted view of Melville water for a distance of six miles, and the beauty of the scenery is much enhanced by the many strips of land which run out from the shore, on either side. On the left bank of the river, separating Perth from Melville water, is a long tongue of land, with a windmill, and on the opposite shore of the narrow passage, Mount Eliza raises its rugged and precipitous sides, which are studded here and there with white-walled cottages, peeping out from the foliage of the casuarina and banksia.*

Fremantle, the sea-port of Perth, distant about fourteen miles by water, and eleven by land, lies immediately behind the little promontory of "Arthur's Head." It is built entirely of white limestone, and the dazzling glare of the walls and houses is, in summer time, rather trying to visitors. It contains a very pretty church, a Wesleyan meeting-house, government store-houses, two good hotels, and some commodious dwellings. During the winter season, bay whaling is actively carried on; and one of

* From interesting sketches entitled *Our Western Australian Home*, by George J. Webb, Esq.,

D.A.C.G., published in an admirable miscellany termed the *Swan River News*.

the most spirited undertakings in the colony is the tunnel, made through Arthur's Head, from the principal street in Fremantle to the whaling jetty. The inland face of the cliff, at the mouth of this tunnel, is cut and finished like a fortification, and being surmounted by the stone gaol and court-house, has a striking effect. The whaling company's storehouses, &c., are partly cut out of the rock, and their ranges of furnaces and try-pots, together with the long sharp boats, suspended over the sea, ready for instant action, with oars, harpoons, baskets of coiled line, lances, and muffled rollocks, convey an idea of energy and activity fully sustained by the character of the Fremantle resident whaling parties. The jetty is built of the "Jarrah" timber of the country, which defies even the sea-worm. Its piles and beams, sunk above fifteen years ago, are as sound as the day they were put down.

Another town, or rather scattered hamlet, in Perth county, named *Guildford*, is advantageously situated at the confluence of the Swan and Helena rivers, about seven miles north-east from Perth, and four miles from the foot of the Darling range. It stands upon the high part of the alluvial flat fringing the river, which extends from half a mile to one mile from it on either side. This flat is so rich, that Captain Stokes states it produced, in 1843, after thirteen years of successive cropping, without manuring, a more abundant harvest than it had done at first. This officer notices, also, that in the year 1833 (a period when the settlers were in want of food), a flight of strange birds, resembling the rail, but larger, appeared in vast numbers near Guildford, when the corn was green: they were so tame, as to be easily taken by the hand; they disappeared in the same mysterious manner as they had arrived, and have not since been seen. There are no stock-farms, properly so called, in this district, and the tillage farms are generally small.

Monger's Lake is situated in a flat, barren tract, about three miles from Perth, and when filled, during the wet season (June), occupies an extent of five miles. There is another lake contiguous. Summer gardens have been formed by the settlers on the borders of these lakes, which yield plentiful crops of melons, carrots, potatoes, and other vegetables. The scenery around, when the beds of the lakes are dry, is very dreary; but in June, the margin of the water is exquisitely carpeted with flowers.

The remarkable stalagmitic caves of *Maidin*, lie about thirty-five miles in a north-north-west direction from Perth, the route being along a chain of beautiful lakes situated from four to six miles behind the sea coast, whose fertile banks afford luxuriant feed for live stock. These caves have been partially explored by Mr. Roe and Mr. Webb, and are somewhat similar to the caves near Bathurst, and in Wellington valley, New South Wales (see pp. 398-9 and 472). Six of the *Maidin* caves examined by Mr. Roe, presented a magnificent appearance; a narrow passage of a few yards expanded suddenly into open extensive chambers, which were traversed to the distance of 180 feet, and found to have an average width of forty-five feet, and a roof of twelve to fifteen feet, thickly studded with beautiful stalactites, some descending to the floor and forming pillars of ten to twelve feet in circumference, for the support of the roof. The floor was covered with layers of smooth, white, and semi-transparent stalagmite. Another chamber, eighty feet long by thirty feet wide, had stalactites of all shapes and sizes suspended from the roof. The cavernous entrances are in some picturesque rocky glens near *Mambibby* lake. The aborigines consider these recesses the abode of evil spirits.

Murray county differs from Perth chiefly in having hardly any lakes, except large swamps on the Serpentine river, fewer rich flats, and more clay upland. It has a few town sites, but no town; the church and barracks at *Pingarro* are very prettily situated, and will form a nucleus for a thriving village. The main streams are the *Murray*, *Dandalup*, *Serpentine*, and *Harvey*. The chief stock of this district are horned cattle and pigs, and its principal produce wheat of fine quality. The farms are generally so well fenced, as to admit of the practice which prevails there, of turning pigs loose in the forest till wanted, and whole herds of these animals wander about at will.

This county, like Perth, includes a portion of the great forest of the Darling range, and is, like it, covered with wood, even on the plain, which is however more hilly and undulating; but the valleys along the range are finer, and abound in permanent rills, and even waterfalls of much beauty, which will eventually prove useful for mills.

Wellington County bears the same general character, but is sufficiently south to render the difference of climate perceptible. In

some parts the grass remains green and the rivers run all the year. It may be considered the finest district outside the range, and offers many inducements to the emigrant. It contains several town sites, but only the seaport of *Bunburry* (see coastline) is inhabited. The *Harvey*, *Brunswick*, *Collie*, *Preston*, and *Capel*, are fine streams, with much rich land on their banks. All kinds of stock thrive well.

It is probable that this district will become the first scene of operations of the Western Australian Timber Company, now in process of establishment, as the naval timber comes down nearer to the port here than anywhere else on the west coast, and some fine cargoes have already been shipped from *Bunburry*.

Sussex County exhibits, as its leading and distinctive features,—extensive low flats of brown loam, swampy country, open downs, and dense forests; the whole fitted rather for English than Mediterranean produce, and for horned cattle and horses rather than sheep. The chief settlement is on the *Vasse* inlet, in *Geographe* bay. This bay affords sufficiently secure anchorage, and whalers resort here constantly for fresh meat, water, potatoes, and other vegetables, butter, cheese, &c., all which are produced abundantly and of the finest possible quality. The cheese of this district is celebrated. It consists of two kinds, one resembling *Stilton*, the other *Cheddar*. The potatoes are the finest in the colony; and its butter finds ready market even in *Perth*.

There is no other town in this county, except that at *Augusta*; but there is much fine country. Proceeding along the south coast, we come to the

Lanark and Stirling Counties.—These do not possess any settlements; though they have, no doubt, especially the latter, abundant sites for farms, and are intersected by numerous rivers and estuaries, some of which might easily be converted into harbours. The timber is the largest in the colony; and its stupendous size may be imagined from the fact, that a seven-ton vessel was entirely built out of the material furnished by a single junk, of thirty feet length, cut off one end of a tree. It often runs 150 feet in height, before it divides into branches. The timber is of excellent quality for building purposes, especially for ships. *Stirling* county has fine timber and good land.

Plantagenet County contains *King George's* Sound harbour, and the town of *Albany*.

The soil is generally of inferior description, although there are several fine farms. The town of *Albany* is handsomely situated, on a high ground, overlooking *Princess Royal* harbour, with two bold and picturesque granite hills, *Mounts Melville* and *Clarence*, on its right and left. The climate of *Albany* is by many preferred, as being cooler than *Perth*; but is liable to high winds, and comparatively less fitted for Mediterranean produce, &c. The scenery in the neighbourhood is in many places beautiful.

Among the detached mountain masses in this part of Australia are the *Toolbrunup* hills, of which the most eastern height, *Koykunarup*, attains an elevation of 3,500 feet. It is ninety miles north of *King George's* Sound, and seventy miles from *Leschenault*, and there is a valuable agricultural and grazing country around.

Kent County is the last settled portion of Western Australia to the south-east; and it only claims that title by virtue of a few stations near *Cape Riche*. It is not much known, but contains some fine country, and will derive future importance from the fact, that the great Western Australian coal formation crops out in seams within a short distance of the harbour of *Doubtful Island Bay*, where there is also a fine district of country.

Hay, *Goderich*, *Peel*, *Wicklow*, *Minto*, and *Grantham Counties*, as we proceed northward, are uninhabited by Europeans; they contain all varieties of soils; and are generally hilly, intersected by streams and rivers, and well timbered; they include the eastern portion of the *Darling* range, and bear a considerable similarity to

York County, the first settled district "over the hills." This, with the adjoining county of *Victoria*, long formed the chief stock districts, but the settlers have lately penetrated above 200 miles northward. These two countries are still, however, of chief importance, both for agriculture and pasturage. In appearance they are very unlike the plain of *Quartania* or *Darling* range, presenting a continually undulating surface, sometimes almost mountainous, always wooded, but seldom so as to obstruct the plough. The best farms are generally on the rivers *Avon* and *Toodyay*; but this is not on account of the soil, which is as good in the back lands, and often on the tops of the hills; but on account of the surface water. The soils are chiefly red and brown loams; sand is rare. The country abounds with building stone; but lime has not been found, unless

in a few places. The farmhouses are generally built of stone and clay, or rammed earth, and are often very well constructed; they have all verandahs, and are not unlike the Indian "bungalows."

Victoria County much exceeds York in quality of soil, in beauty of scenery, and, indeed, in all respects. The Toodyay valley contains noble farms, both for stock and tillage.

From these districts northward, the settlements are more of the squatting character, with the exception of the rich Gingin agricultural district, on the borders of Perth and Twiss counties, and the Moore river farms in Melbourne county. On the latter is a settlement of Spanish Benedictine monks, with a bishop, who carry on farming, pastoral, and vineyard operations, for the purpose, as they state, of civilising the aborigines.

The eastern counties of Howick, Beaufort, Lansdowne, Durham, Carnarvon, Grey, &c., are little traversed or known, and are not likely to be settled so long as good lands remain open for that purpose nearer the coast.

It appears that up to the year 1847, the lands granted and purchased in fee-simple in Western Australia amounted to 1,319,973 acres, and the lands sold, to 8,925 acres = 1,328,899 acres. The estimated number of acres that remained ungranted in 1848, was 19,201,274. There is, therefore, abundant space for the extension of a white population; and even after making all due allowance for exaggerated estimates, the available land discovered in the neighbourhood of Champion bay would support a very large number of inhabitants.

GEOLOGY.—Along the coast-line of Western Australia there is a continuous bed of limestone, covered in many places by sand dunes. The table-land of the Darling range consists of sienitic granite; to the north, near the Murchison and Irwin rivers, is an elevated tract of new red sandstone.

Throughout the greater part of Western Australia there is an absence or scantiness of the *secondary* or transition rocks; all the *tertiary* appear to be of the newest kind, and to lie in juxta-position with the primary.* On the east side of the Darling range, close to the base, are several groups of isolated conical hills, about a mile apart, bearing on their summits strong marks of ignition, and extending from the William

river to the Toodyay district. Further east, the country passes into sandy plains, intersected by water-courses, somewhat similar to those on the western side of the range. On the mountains, as well as on the plains, pebbles are to be met with in patches, containing magnetic iron.

Mr. J. W. Gregory is of opinion, *first*, that the Darling range possesses no true anticlinal axis, but is a sudden break and descent from the table-land of the interior to the plain of Quartania, which will account for the non-appearance of the silurian system, and the very narrow belt of chlorite and clay-slates; *secondly*, that the Darling range attained nearly its present elevation (that is compared with the other strata, but not with regard to the actual sea level) before the period of the coal formation; *thirdly*, that the range formed the sea-coast during the deposition of coal, and its accompanying shales, appears probable from the beds of marine shells interstratified with them; that after this period the whole country was immersed, while the new red sandstone was deposited, as this formation extends over all the known portion of Western Australia, after which the whole of the present land was upheaved, and without great violence, as this sandstone is remarkable for the horizontal position of its upper strata, and it has not since been submerged, with the exception of the present line of coast where a narrow belt of limestone hills containing shells of existing species, and the water-worn boulders on the western coast of Sussex, indicate a more recent change of elevation than that which upheaved the new red sandstone above the influence of the sea. Mr. Gregory thinks it is also remarkable that the absence of intermediate strata between the older slates and the carboniferous system, and also between the new red sandstone and the tertiary rocks, has been observed on the eastern coast of Australia, and in similar parallels of latitude.

MINERALOGY.—The geological characteristics, and the position of the mountain ranges, indicate a rich mineral country, and recently copper, silver, lead, and coal, have been found, of an excellent quality, in the newly explored region in the vicinity of Champion bay. Iron also abounds.

The mines explored on the Canning river are curious; they all begin with lead, copper, zinc, and iron, mixed, but as the shaft is sunk, the zinc predominates; in one (the fifty acre) section, there is a regular lode of

* Mr. Bynoe, surgeon to H.M.S. *Beagle*.

zinc yielding (66 lbs. 11 oz.)* sixty-six per cent. on assay. The Matrix is a quartz lode about two feet wide, and full of bits of ore, sixty-six per cent. of zinc. The country is soft granite, and is expected to pass into slate. The galena or sulphuret of lead ore discovered recently near the Murchison river, when analyzed (22nd May, 1849) by Sir H. T. De la Beche, at the Museum of Practical Geology, in London, at the request of Earl Grey, was found to contain sixty-five per cent. of lead, and pronounced to be "therefore a good ore, and if found in abundance, very valuable to the colony."

The coal bed discovered by the Messrs. Gregory on the Irwin river, 210 miles north of Fremantle, and forty miles from the sea, is in two seams in the following order of stratification:—red sandstone, black shale, white clay, coal five feet thick; red sandstone, black shale, white clay, coal six feet thick; the strata then deepened, and the next coal seam was hidden. The first 100 feet of depth consisted of coarse red sandstone. The coal burns well, blazes brightly, and consumes to a white ash. It is supposed that the coal bed continues in a south-east direction to the southern coast of Australia, near Doubtful Island bay, where coal has been found cropping out close to the coast.

SOIL.—Very various; there are many extensive wastes, but there are also numerous rich alluvial flats, and the limestone and coralline sandy strata on the Quartania plains, when trenched, yields good crops, especially of Mediterranean produce. The vine, olive, and tobacco thrive luxuriantly; the silk-worm might also be extensively reared, as the mulberry is well suited to the soil and climate.

The geological formation of Western Australia renders it as easy to get water there by sinking Artesian wells at a depth of fifty feet, as it would be in Europe at five hundred feet. Dr. Van Sommer calculates that by a fortnight's boring two men with an engine could obtain a supply of water sufficient for the irrigation of 500 acres.

CLIMATE, dry and warm, near Perth; and of acknowledged salubrity. Along the south coast the temperature is much lower, and there is more rain. Western Australia is not subject to the droughts which prevail

* The best English zinc ores, those of Allowhead, in Northumberland, contain no more than 58 lbs. 13 oz. in the 100 lbs.

on the east coast; it is open also to the influence of the monsoons, and the annual fall of rain is greater than in some parts of England. The hot winds blow from six to twelve days in the season. The mean of the thermometer at 9 A.M. is 60° to 62°; at 3 P.M. 68° to 70°. *Winter*—9 A.M. 52°; 3 P.M. 59°. *Summer*—9 A.M. 69½°; 3 P.M. 80°. The summer commences about the middle of November and continues to the middle or end of April. December, January, February, and March are the hottest months in the year; but in the warmest weather labourers may work all day in the open air, with no more inconvenience than on a summer's day in England. The adaptation of the climate for an European population is shown by the state of the ages and number of the inhabitants.

In October, 1848, the census returns showed, that out of 4,622 inhabitants, there were, under three years of age, males, 267; females, 244: from three to fourteen years, males, 606; females, 605: from fourteen to sixty years, males, 1,820; females, 913: beyond sixty years of age, males, 30; females, 17.

The abstract of the census of 1848, which I have received, does not show the proportion of births to deaths, nor of males to females born: but in two preceding years, the relative proportions were—

Year.	Births.	Deaths.	Difference
1842-3 { Females . . .	85	9	77
{ Males . . .	83	32	51
1843-4 { Females . . .	107	16	91
{ Males . . .	86	37	49

Preponderance of female over male births, in two years, was 23. The net increase of female births over deaths was 167, and of males, 100. This confirms an observation made in a previous part of this work—that in a salubrious climate, fertile soil, with sufficiency of food and comfort, and among a free people, it appears to be a fixed law of population that the female shall predominate over the male births.

The colonial surgeon, Mr. Ferguson, gives the following comparative statement of deaths among 1,000 people, in several places:—Western Australia, 12; New South Wales and Van Diemen's Island, 15; Cape of Good Hope, 16; Nova Scotia and New Brunswick, 18; East and West Canada, 20; Gibraltar, 22; Ionian Islands, 28; Mauritius, 30; St. Helena, 35.

ZOOLOGY.—The native animals of Western Australia do not comprise all those contained in the island-continent, which are few in number, and very peculiar in kind. Of all the known mammalia, but fifty-eight species, or about the one-seventeenth part of the whole, belong originally to this region; and of these, more than one-half are of the *marsupial* order. Of Cuvier's order of *carnivora*, if we except the marine mammals of the seal genus (*phoca*), the dingo, or native dog, is the sole representative, and the important orders of *quadrumana*, *pachydermata*, and *ruminantia*, appear to be without any land representatives in this large portion of the globe. Of the *edentata*, the genera *echidna*, and *ornithorhynchus*, are destitute of teats, and do not suckle their young. The former genus (*echidna*), consists of two species of porcupines, one entirely covered with thick spines, the other clothed with hair, in which the spines are half hidden. The *ornithorhynchi* consist also of two species—*O. rufus* and *O. fuscus*. These creatures unite with the body, the fur, and habits of a mole, the webbed foot and bill of a duck; are ovoviviparous, and have the internal formation of a reptile. They are very shy, and lead a burrowing life in the mud of rivers and swamps.

Of the *rodentia*, two species belong to the sub-genus *hydromys*, and consist of creatures that seem to unite some of the peculiarities of the dormouse, rat, and beaver. A new genus of *rodentia*, discovered by Mitchell, and called by him the flat-tailed rat, is remarkable for the enormous nest of branches and boughs, which it builds so strongly, as to be proof against the attacks of the dingo, or native dog. The rabbit rat, which climbs trees like the opossum, is described by Mitchell, as having feet resembling those of a pig, the marsupial opening downwards, instead of upwards, as in the kangaroo, and about the size of a rabbit, but without a tail. Two species of mice (both peculiar), and the *dipus Mitchelli*, Australian jerboa, are included in the list of *rodentia*, and the *myrmecobius rufus*, or red shrew-mouse, is sometimes considered as belonging to that order. With these few exceptions, the whole of the Australian mammalia are of the *marsupial* order, of which there are many species; the only character common among them being what has been termed the premature production of their young; for even in the few kinds of *marsupialia* not possessed of pouches,

the young hang to the *mammæ* of the mother for a considerable time. The most numerous and important are the several varieties of the well-known kangaroo (*macropus*), one species of which (*macropus unguifer*), has the singular appendage of a nail, like that on the little finger of a man, attached to its tail: the others are the different species of opossums, bandicoot, or pouched badger, a sort of sloth (*phascolarctos*), the wombat (*phascolomys*), an animal about the size of a badger, and very slow in its movements, and the kangaroo rat (*pataroo*), a diminutive kangaroo.

ORNITHOLOGY.—The list of Australian birds present but two orders, wholly peculiar, namely, the *syndactyles*, of which the most beautiful are “the sacred kingfisher,” the variegated bee-eater, the charming little trochilus, or humming-bird, and the *scan-sores*, consisting of parrots, parroquets, cockatoos, &c., which are very numerous, and adorned with every variety of gorgeous plumage. Among the order *accipitres*, is a species of vulture, so fierce, that when pressed by hunger, he has been known to attack the natives themselves. The white eagle is also a very rapacious bird. The cream-bellied falcon, the orange-speckled, and the milk-white hawk, are common varieties; the last especially makes great havoc among the poultry. Of the owls, the most numerous is the bird called the cuckoo by the colonists, and “buck-buck” by the natives, from the cry which it reiterates during the winter nights. The order *dentirostres* includes a beautiful bird, having the habits of the red-breast; several varieties of the thrush, one of which has obtained the soubriquet of the *laughing jackass*; a description of field lark, and the wattle bird, which utters a chattering note; swallows and goat-suckers, of the order *fissirostres*, are numerous.

Conirostres.—There are several magpies and crows of this order, and beautiful birds of paradise, but the latter, like the various species of *epimachi*, are confined to northern Australia.

Gallinæ.—Pheasants, quails, and pigeons are in considerable numbers, of the latter the most remarkable variety is the *bronze-winged*. *Grallæ*.—The cassowary or emu is found in nearly all parts of Australia. It is a very wild creature, and runs more swiftly than an English greyhound. The eggs are of an elongated form, and of a green colour; the flesh though coarse is eatable, especially that of the young. Australia has also some species of bustard, curlew ibis,—some of a

glassy rifle-green; herons, avasets, rails, snipes, spoonbills, &c.

Palmipedes.—The black swan is found here. Gannets or boobies are numerous, especially on the north coast, where pen-guins, petrels, and ducks also abound. The *cereopsis* somewhat resembles the goose.* Vampires of a large size are numerous.

REPTILIA.—The reptiles of Australia consist of two or three genera of turtles; as many varieties of alligators, a considerable number of lizards and serpents, both venomous and harmless. The great *lacertæ*, as alligators, &c., do not appear to have been found in Western Australia. The land-lizard, and the crimson-sided snake (*Coleberporphyriacus*), are of extraordinary beauty. Serpents, also, of different species, have been seen floating upon the water, in chase of the curious ponquin. Frogs are numerous. A variety of lizard (the *chlamydosaurus Kingii*) is remarkable for a *frill* behind the head and above the shoulders.

INSECTA.—The insects are very numerous, and many of the butterflies, moths, and beetles, are brilliant and beautiful. Locusts abound in the hottest season. In swampy places mosquitoes are extremely troublesome, but they are scarcely known in the upper lands. Scorpions and centipedes are found among dead wood. Wild bees swarm in many places, depositing their delicious honey in the hollow trees. Flies, especially the blow-fly (*musca carnivora*) are numerous in some districts. The gum-grub, an insect about four inches long, is esteemed by the natives a great dainty, and there are various species of ants in Australia, some of which are provided with wings. Ant hills have been found measuring thirteen feet in height, and seven at the base, tapering gradually to the summit.

Botany.—The vegetation of Australia has been frequently alluded to, and will be more fully dwelt on in describing that of Van Diemen's Island, which it closely resembles.

CHAPTER III.

POPULATION, EUROPEAN AND ABORIGINAL—LAND IN CULTIVATION—LIVE STOCK—LOCAL RECEIPTS AND EXPENDITURE—PARLIAMENTARY GRANTS—VALUE OF COMMERCE—SHIPPING—STAPLE PRODUCTS—TARIFF OF DUTIES—ITEMS OF TAXATION—GOVERNMENT—RELIGION—EDUCATION—CRIME—THE PRESS—PRICES OF PRODUCE—COLONIZATION ASSURANCE COMPANY—TRANSPORTATION TO WESTERN AUSTRALIA. SUMMARY—STATISTICS OF FOUR COLONIES IN AUSTRALIA.

THE disastrous state of affairs at the early formation of the colony, precluded the collection of statistical returns, and it is only within the last few years, that any complete Blue Books have been received at the colonial office. By an examination of various statements and authorities, I have endeavoured to frame the following connected view of the state of the colony from 1834 to 1848, in its different aspects of population, cultivation, farming stock, revenue, and expenditure, commerce, shipping,

&c. From this document the present social condition of the country will be seen; and it may be noted, that for the last five years there has been a progressive advancement in population, cultivation, trade, and other elements of prosperity. In 1830, the white population were computed at 1,500; in 1831, there were 200 acres of land under cultivation with the hoe and spade, and 100 acres of wheat were reaped; in 1832, there were 440 acres of grain crops; and in 1833, 600 acres; the progress has since been—

* The habits of the Australian birds are most peculiar; one, commonly called the *bower bird*, builds for itself a kind of roofed and sheltered pleasure-ground (see Gould's *Australian Birds*); another, the *megapodius tumulus*, constructs a nest in the form of an irregular truncated cone on an oblong base, one of which Captain Stokes found to measure 150 feet in circumference; the slope of its sides being from eighteen to

twenty-four feet, and its perpendicular height ten or twelve feet. It was composed of earth, fragments of coral or stone, and pieces of stick. On examining these mounds by clearing away three or four feet of earth, the eggs of the bird were found, measuring eight and a-half inches lengthwise in circumference, and six and three-quarters across. There was no increase of temperature in the mound.

The following Statement shows the Condition of the Colony as respects Population, Acres under Cultivation, Live Stock, Income and Expenditure, Commerce, Shipping, and Exportation of Staple Products, between 1834 and 1848: it has been prepared from various returns and documents, with a view of tracing the Progress of the Colony since its formation. I could not obtain any reliable data between 1829 and 1834.

Population, Land, Live Stock, &c.	1834.	1835.	1836.	1837.	1838.	1839.	1840.	1841.	1842.	1843.	1844.	1845.	1846.	1847.	1848.	1849.
European Population:—																
Children, under 12 years	—	—	—	647	—	—	592	—	—	1,188	—	—	—	—	—	—
Males, above 12 years	—	—	—	858	1,152	1,302	1,205	1,706	2,115	1,714	—	—	—	—	2,818	—
Females, above 12 years	—	—	—	442	776	832	557	1,054	1,361	951	—	—	—	—	1,804	—
Total	1,600	—	—	1,847	1,928	2,154	2,354	2,760	3,476	3,653	—	—	—	—	4,622	—
Acres under Cultivation:—																
Wheat	564	1,156	1,363	1,253	1,400	1,471	1,650	1,899	2,039	2,884	3,283	3,313	3,977	2,975	3,316	—
Barley	100	155	209	253	240	260	337	335	444	447	538	592	506	554	672	—
Oats	116	126	128	141	100	98	48	130	129	120	79	63	125	51	183	—
Rye	—	1	7	5	16	77	50	33	71	32	28	15	68	50	100	—
Maize	—	—	—	—	—	—	—	—	—	4	17	19	31	20	38	—
Potatoes	15	31	32	36	—	—	50	—	—	81	77	76	139	—	120	—
Vineyard	—	—	—	—	—	—	—	—	—	—	—	—	—	—	114	—
Olive ground	—	—	—	—	—	—	—	—	—	—	—	—	—	—	10	—
Kitchen garden	—	80	112	115	—	—	200	225	280	274	306	269	299	271	224	—
Green crops	123	85	240	276	701	819	800	706	330	713	632	651	—	1,862	2,320	—
Total	918	1,634	2,091	2,079	2,457	2,725	3,135	3,328	3,364	4,566	4,860	4,830	5,137	5,784	7,174	—
Live Stock:—																
Horses	162	167	216	254	271	367	500	858	1,069	1,202	1,231	1,430	1,727	1,841	2,095	—
Horned Cattle	—	646	829	837	1,052	1,308	2,318	2,917	4,122	4,861	5,376	6,508	7,583	8,699	10,919	—
Sheep	3,500	5,138	8,527	10,271	15,590	21,038	30,161	44,551	60,380	76,191	86,482	95,681	102,084	114,124	141,123	—
Pigs	—	—	—	704	970	1,235	1,595	8,161	1,713	1,951	1,702	—	2,953	2,963	2,287	—
Swine	—	—	—	—	—	—	4,604	5,547	5,615	3,733	3,227	2,632	2,223	1,766	1,431	—
Goats	—	657	1,289	1,690	2,436	—	—	—	—	—	—	—	—	—	—	—
Total	4,162	7,158	11,680	13,756	20,319	23,948	39,178	62,034	72,899	87,938	98,018	106,251	116,570	129,393	157,855	—
Local receipts of revenue in £	—	6,884	—	4,586	5,193	3,912	9,376	11,646	9,970	10,312	9,754	7,127	7,853	8,453	10,723	—
Parliamentary grant expenditure in £	—	5,291	6,153	7,230	6,945	7,008	5,373	6,819	7,961	7,479	7,092	7,090	7,250	6,893	7,695	—
Commissariat, military expenditure in £	—	8,708	8,049	11,544	11,344	13,199	11,440	13,219	12,344	10,752	9,973	10,746	9,864	10,255	11,545	—
Value of commerce:—																
Imports in £	—	50,000	50,636	39,283	45,401	40,000	—	—	37,486	36,441	36,685	20,349	25,959	25,463	45,411	—
Exports in £	1,020	1,740	2,850	6,906	6,840	5,448	—	—	7,089	13,364	13,609	13,353	20,223	24,535	29,568	—
Shipping inwards, in tons	3,120	4,048	5,587	3,031	—	16,805	39,611	39,850	32,496	17,130	10,002	7,855	6,365	5,406	15,494	—
Wool Exported:—																
Quantity in lbs.	—	—	—	—	—	36,450	50,000	—	84,640	123,495	140,155	145,254	291,368	239,247	301,965	—
Value in £	—	—	—	—	—	2,278	—	—	—	6,125	7,008	7,257	13,363	11,464	9,666	—

Note.—There are no census returns between 1843 and 1848. The agricultural returns do not include King George's Sound, the Vasse, and Port Augusta districts. There are no returns of the imports and exports for the years 1840 and 1841, nor is there any return of shipping for the latter year. We have no return of the wool exported from the colony in the year 1841. Wherever there are blanks in this table no returns are procurable. * Vessels coastwise not returned after this date.

ABORIGINES.—The state of the aboriginal inhabitants in Western Australia is far superior to that attained by them in any other Australian colony. This most honourable peculiarity, however, though doubtless attributable, in the first instance, to the personal character and conduct of the early settlers, of whom an unusual proportion belonged to the better classes of society, and to the judicious policy pursued by the local government, appears to have been, nevertheless, in no small degree brought about by the very fact in other respects so injurious to the colony, namely, the sudden cessation of immigration, which not only left the same individuals to carry out the original system with regard to the savage, but rendered caution and forbearance, as well as firmness, obviously indispensable. The settlers are reaping their well-merited fruits, in the perfect tranquillity they enjoy, and the very considerable assistance they receive from the coloured population. So completely have the natives learned to appreciate their rights as British subjects, that they now appeal to the tribunal of the law in their differences with the "white fellows," and occasionally even in those with each other.

The numbers receiving regular and casual employment in 1848, was—

County or District.	Males.	Females.	Total.
Perthshire	130	32	162
Yorkshire	65	10	75
Wellington	65	11	76
Plantagenet	53	7	60
Toodyay district	52	53	105
Sussex	47	8	55
Murray	6	2	8
Total	418	123	541

Of these, many are employed about the farms as herdsmen and messengers, and occasionally in reaping and harvest work, some, more regularly as servants; but in general, they refuse all hard or steady work, and no wages will induce them to forego any amusement, or to settle permanently in one place. They are essentially creatures of impulse, absolutely devoid of any desire

* In a recent letter from Western Australia, dated March, 1850, is the following statement:—"We run the mail to York, to Bunbury, and to Vasse once a week, with natives only. The York native is mounted, and costs us some £36 a year. The Perth and Fremantle and the Guildford mails are run daily, with the utmost punctuality, and cost but the natives' rations, as they are prisoners on their parole, and there is a spare man in case of the sickness of any of these

to better their condition, and inclined to look with contemptuous superiority upon the laborious habits of their new associates. "White fellow," say they, "fool, too much! work, work, always work! Black fellow play, plenty play!" They appear, nevertheless, to be attached to the "white fellows," and are a merry, harmless, idle, good-natured race; sometimes very useful, often most provoking; on the whole, honest, but afflicted with a constitutional preference of mutton to kangaroo, which is the fertile source of compulsory labour on the roads.* Schools have been established for the children, and an institution is maintained by the Wesleyan body, assisted by government, at which indefatigable and judicious efforts are made to infuse into their minds the principles of religion and social improvement. Their quickness of apprehension as shown in the facility with which they learn reading, writing, arithmetic, &c., is said to *greatly surpass that of the white child*, and the mere experience of the schools would warrant the highest expectations of their future acquirements; with puberty the inherent idleness, and the restless longings after the wild and wandering life of the bush, are developed—and the clean, bright, intelligent child, able, not merely to read, but to understand what he reads, merges into the filthy, lazy savage, gorging himself to stupidity, and basking under a gum-tree. In some instances, however, the persevering care of the teachers has succeeded in inducing a few to remain on the establishment, to marry, and cultivate land for their own support.

The classified occupations of the white population in 1848 was, in—

Agriculture.—Occupiers, employing labourers, 124; ditto, not employing labourers, 176; agricultural labourers and gardeners, 476.

Grazing.—Employed in the care of sheep, 121; of cattle, 24.

Trade.—Shopkeepers, and other retail dealers, and their assistants, 64; bricklayers and masons, 32; smiths, 22; carpenters, joiners, plumbers, and glaziers, 98; tailors and shoemakers, 39; sawyers and splitters, 49; other non-agricultural classes, capital-men: these are all brought from Rottneest. The men who go from Fremantle to Mundurah, Bunbury, and Vasse, are also prisoners. We have no less than four native prisoner boys generally serving on board the *Champion*. You would be surprised to see one of them steering the vessel, going aloft to reef a top-sail or furl a royal. The governor has one now for a body servant, and a number of our teams are brought into town by them."

ists, bankers, professional, and other educated men, their clerks and assistants, 44; civil officers, their clerks and assistants, 69; labourers, employed in labour not agricultural, including mariners, boatmen, fishermen, toll-collectors, road-makers, carters,

&c., 241; domestic servants (male), 55; military men, 103; all other males, above fourteen, not included in the above, 106. Residue (women, children, and others), 2,690.

The state of each of the settled districts is thus shown on the 10th October, 1848:—

Population, Land, Live Stock, &c.	Perth County.	York County.	Welling- ton County.	Plantage- uet County.	Toodyay District.	Sussex County.	Murray County.	Total.
Population:—								
European, males . . .	1,415	425	217	186	258	142	98	2,818
" females . . .	1,098	199	141	114	107	82	51	1,804
Total	2,513	624	358	300	365	224	149	4,622
Aborigines, males . . .	302	—	—	300	—	100	39	—
" females . . .	221	—	—	150	—	50	34	—
Total	553	134	300	450	300	150	73	1,960
Acres under Cultivation:—								
Wheat	1,064	771	406	92	484	126	371	3,316
Barley	143	172	99	35	106	103	11	672
Oats	113	9	—	4	7	—	—	133
Rye	44	15	6	5	5	20	3	100
Maize	29	1	—	5	—	2	1	38
Potatoes	48	1	20	13	2	33	3	120
Vineyard	90	11	7	—	2	1	1	112
Olive-yard	8	—	2	—	—	—	—	10
Kitchen garden	146	21	24	12	10	15	15	243
Green crops	990	494	69	44	355	184	184	2,320
Live Stock:—								
Horses	394	610	124	251	460	184	72	2,095
Horned cattle	2,873	1,483	1,729	505	1,682	1,472	1,175	10,919
Sheep	8,888	62,409	3,415	9,582	49,180	6,020	1,629	141,123
Swine	786	543	167	85	367	134	205	2,287
Goats	1,050	25	198	—	31	43	84	1,431

Note.—The total of the return of European population includes the troops stationed in the colony, their wives and children, numbering altogether 162. It also includes 77 males and 12 females = 89, on board colonial vessels and on emigration parties. Of the aborigines 418 males and 123 females are regularly or casually employed by the Europeans.

GOVERNMENT.—The colony is at present ruled by a governor, aided by an executive council, consisting of the colonial secretary, advocate-general, surveyor-general, and collector of revenue. There is also a Legislative Council, composed of the above, in conjunction with the civil and criminal judge, and with three non-official members appointed by the crown; but it is probable that a more popular form will soon be adopted, under the provisions of a bill for the "better government of her Majesty's Australian colonies," which has undergone full discussion in both houses of the Imperial Legislature, while this volume has been passing through the press, and received its final decision in the House of Commons on the 1st August, 1850. The provisions of this bill, as first introduced to parliament, in March last, are stated at pp. 555—560: since then, the bill has undergone several modifications in the House of Lords. The proposed power to create a Federal Assembly of the Australian colonies, which, I feared, would prove a source of contention (see p. 558), has been withdrawn, as also the power to dispose of the crown lands by the said

Assembly (see note, p. 554): the qualification of voters is fixed at the possession of a freehold estate, of the clear annual value of £100; a £10 household franchise; or the possession of a leasehold estate or licence to depasture lands from the government, of the value of £10 sterling per annum. Under the amended bill, the colonial Legislative Councils have power to alter the qualifications of electors, and to divide the Legislative Council into two chambers; but they have not the power to declare there shall be a single legislative chamber, or that the nominees of the crown, whether official or non-official, shall be altogether excluded from that chamber. A Legislative Council may be established in Western Australia, as in the other Australian colonies, if petitioned for by not less than one-third in number of the householders within the colony, provided the province undertakes to defray the expenses of the civil establishment, which have been heretofore borne by the Imperial Parliament, such sums to be permanently granted to the crown out of the colonial revenues, and to form a civil list.

MILITARY DEFENCE.—About 100 men, including three officers, stationed in different places. There are barracks at Perth capable of holding sixty men; also small barracks at Albany, Kogonup, Bunburry, York, Pin-garra, and Rottneest Island.

RELIGION.—The religious denominations in the colony, October, 1848, were—church of England, 3,063; Wesleyan methodists, 276; independents, 187; other protestant dissenters, 188; protestants, 311; church of Rome, 337; Mahomedans and Pagans, 90; religion not specified, 169. The church of England colonists in Western Australia have built ten churches—and several temporary places of worship—have subscribed 8,000 acres of land towards a bishopric fund, and have contributed liberally towards the maintenance of their clergy and the establishment of schools. The church at Perth, capable of holding 1,000 persons, has cost £3,500, and that at Fremantle, £1,500. There are seven clergymen of the established church, under the supervision of an arch-deacon; and three of the church of Rome, under a Roman catholic bishop. There are also several exemplary dissenting ministers.

EDUCATION.—The governmental schools are under a board of education; the instruction is entirely secular. In the Roman catholic schools the Irish national system is adopted.

Schools.	No.	Male Pupils.	Female Pupils.	Total.
GOVERNMENTAL:—				
Perth	2	55	28	83
" infant	1	27	33	60
Fremantle	2	26	10	36
Murray	1	9	5	14
Guildford	1	18	6	24
York	1	28	—	28
Albany	1	14	19	33
In connection with R. Catholic Church. }	3	61	105	166
Total	12	238	206	444

THE PRESS.—Two well conducted newspapers are published at Perth, and an excellent Western Australian almanac, replete with useful topographical and statistical information, has been published in the colony for the years 1842 and 1849.

CRIME.—Number of *felonies* in 1848—whites, 11; blacks, 47. Of *misdemeanours*—whites, 14; blacks, 4.

TAXATION.—The duties levied in Western Australia, in 1848 (Blue Book), were:—On spirits imported, the produce and manu-

facture of any part of the British empire, 6s. per imperial gallon; ditto foreign produce and manufacture, 8s. per gallon; wines, produce and manufacture of British empire, 6d. per gallon; ditto, foreign, 1s. 6d. per gallon; cigars and snuffs, 2s. 6d. per lb.; tobacco of all other kinds, 1s. per lb.; live stock imported from any part of the British empire, 6s. per cent., other places, 12s. per cent.; goods, ware, and merchandise, the growth, produce, or manufacture of any part of the British empire, not otherwise charged with a specific duty, 6 per cent.; ditto of any foreign state, 12 per cent. *Internal duties*—Auction duty, 2½ per cent.; on registering transfer of landed property, 1 per cent.; spirit licences, £10 to £25 per annum; auctioneer and attorney licences; dog tax; licences to cut timber, on 640 acres, £20 per annum, or 10s. a month for each pair of sawyers; licences to occupy crown lands for pasturage, from £10 per annum for 4,000 acres, to £20 per annum for 20,000 acres. Licences for boats and for boatmen, warehouse rents, &c.

The revenue raised in Western Australia for three years was—

Details of Revenue.	1848.	1847.	1846.
Duties on spirits	£3,494	£3,689	£3,475
" wine	507	403	288
" tobacco	910	658	790
" goods imported, <i>ad valorem</i>	2,143	1,533	1,393
" goods sold by auction	92	84	117
" transfers of land	22	44	35
Licences to sell spirits	547	482	498
" to sell by auction	31	32	15
" to keep dogs	80	41	51
Warehouse, rent of	—	—	—
Spirits in bond	111	48	33
Fees of public officers	107	164	148
Post-office department	298	296	332
Total	8,345	7,674	7,175
Sale of crown lands	463	251	124
Licences to occupy ditto	576	920	258
" to cut timber	226		
Perth jetty dues	24	20	63
Repayment of crown debts	611	99	283
Rottneest establishment	158	69	39
Judicial fines and forfeitures	39	101	54
Miscellaneous	41	1	165
	2,147	1,461	986
On account of parliamentary grant	7,695	6,893	7,250
On account of juvenile immigrants from Parkhurst	277	—	—
Grand total	18,464	16,028	15,411

The civil expenditure in 1848 was—

Departments.	From Parlia- mentary Grant.	Colo- nial Fund.	Total.
Audit office	—	£293	£293
Colonial secretary's office . .	£681	127	808
Colonial treasurer's office . .	—	63	63
Commandant	177	—	177
Customs revenue	—	891	891
Council	—	150	150
Ecclesiastical office	292	376	668
Governor's office	1,118	100	1,218
Harbour-master	—	512	512
Medical department	266	270	536
Natives and native schools . .	744	221	965
Police force	—	690	690
Post-office	—	596	596
Public works	—	845	845
Registrar-general	—	20	20
Registrar of deeds	—	62	62
Roads and bridges	—	468	468
Rottneft establishment	—	393	393
Schools	—	212	212
Surveying department	1,620	961	2,581
Judicial department	1,558	694	2,252
Miscellaneous	133	2,250	2,383
Juvenile immigrant department	276	—	276
Colonial vessel	827	—	827
Total expenses	7,692	10,194	17,886

Total expenditure of the troops in Western Australia, during 1848, for pay, allowances, pensions, supplies, exclusive of the salt meat and candles sent from England, and transport, £10,501; repairs to military buildings, lodging money, &c., £1,044 = £11,545; add Parliamentary grant for civil expenses, from military chest, £7,128 = 18,673.

COMMERCE is increasing, and the exports fast rising to a level with the imports. The details of trade in 1848 were—

ountries.	Imports from	Exports to	Shipping Inwards.
			Tons.
United Kingdom	£19,218	£12,965	1,416
British Colonies	24,922	15,612	4,888
Foreign	624	1,020	9,190
Total	£44,764	£29,597	15,494

Staple Products.—Wool, timber, oil, fish; to which will, probably, soon be added copper, lead, and other metals.

A *Geraldine Mining Company* has been established at Perth; capital £6,400, in 1,280 £5 shares. A silver-lead mine, in the Toodyay district, yields five ounces of silver to the ton of ore, roughly assayed.

Mother-o'-pearl shells, which are worth from £20 to £70 a ton, cover a district of Sharks' bay having six to twelve feet

water; and pearls as large as peas have been recently collected there. An island covered with guano, equal to that of Peru, has been recently discovered in the same neighbourhood; where the raspberry (an *acacia*, so called from the odour of the timber), sandal, and red ebony woods have been found growing within 200 yards of the beach. The sandal wood of Western Australia is a lucrative article of export; some sent by the *Vixen* to Singapore, for the China market, sold for £21 per ton, leaving a net profit of £17 per ton. Her Majesty's dockyards are now contracting for the excellent ship timber of Western Australia, some of which (the *jarrah*) endures any time in water, and is not eaten by that destructive worm the *teredo navalis*; ships built with it require no coppering; a plank may be cut of any size; and there is enough of timber and knees, of the best kind, to supply the British navy for centuries.

A forest of the *jarrah*, or mahogany, at a distance of eighteen miles from Perth, and twenty from the sea, extends over a tract of at least 300 miles from north to south, with a known width of thirty miles from east to west. The trees are very fine; and it has been computed that this forest alone contains sufficient of this invaluable timber to build 200,000 line-of-battle ships, reckoning the largest amount of timber ever required for a ship as the average: 20,000 navies equal to all those of Europe might therefore, be constructed from this single forest.

The *jarrah*, and indeed all the heavy timber of the colony, is included in the genus *eucalyptus*; but the species are very numerous: of these, that called the *tuart* ranks next to the *jarrah* in value, and is indeed, in some respects, superior to it, but is not nearly so abundant.

The *white gum* much resembles the *tuart*, and partakes in its remarkable quality of scarcely shrinking in the process of drying; but it is looked upon with an evil eye by the settlers, as indicating the predominance of sand or of ironstone and clay in the soil.

The *red gum*, one of the least common of its tribe, though of no great value as timber, being subject to gum-veins, is easily worked, and much used in the colony for spokes of wheels, &c.: it is nearly equal to lance-wood.

The *morrel*, chiefly found in the Toodyay district, is highly esteemed for its toughness and strength.

The *great blue gum* is found in perfection in the neighbourhood of Nornalup and the Deep river, between Augusta and King George's Sound, where it attains the extraordinary height of from 100 to 150 feet, and measures fifty feet in circumference.

There are, besides, the *black butt*, *salmon gum*, and many others.

The ornamental woods of the colony are numerous, and many of them very beautiful in grain and figure. The *sandal wood* has been before mentioned. The *raspberry*, or *jam wood*, which somewhat resembles rose-wood in grain and colour, grows generally in the country within the range. The *casuarina*, or she oak, found mostly in the sandy districts near the coast, when well worked up, is a very pretty wood.

Besides these, there are several other kinds of ornamental woods, as the *banksia*, and various species of *dryandria*, one of which is called satin-wood by the colonial cabinetmakers.

Fisheries.—At present, only one vessel and about eighteen boats are employed. The Americans and French carry on extensive whaling pursuits in the very harbours of Western Australia, whose fisheries are among the finest in the southern hemisphere. The entire coast swarms with snapper, whiting, mullet, bream, kingfish, mackerel, &c., of the highest quality. The snapper weighs from 10 lbs. to 40 lbs.; and dried, sells for £16 per ton, at the Mauritius.

BANKING AND MONETARY AFFAIRS.—An excellent institution termed the *Western Australian Bank*, was established in June, 1841, with a subscribed capital of £20,000, in 2,000 £10 shares. The capital paid up is £5,544, by about 100 proprietors. The dividend paid for the last five years has averaged twelve and-a-half per cent. per annum. The paper circulation in July, 1849, was £2,652; the bills under discount, £10,360; and the deposits not bearing interest, £13,718. *Coin* of all descriptions in the colony, about £11,000.

Exchange.—Bills on her Majesty's Treasury, and on agents of Western Australian Bank, London, at par in 1848. Private bills on London, at thirty days' sight, five per cent. discount.

Prices of Produce in Western Australia in 1848:—Wheat, per bushel, 5s.; barley, 4s.; oats, 4s.; horses, £20; horned cattle, £6; sheep, mixed flock, 4s.; goats, milch, 5s.; swine, 10s. each; flour, per ton of 2,000 lbs., £16; wheaten bread, per lb. 2½d.; milk, 4d. per quart; butter, 1s. 6d.; cheese, 1s. 2d.; beef

5d.; mutton, 3½d.; pork, 8d.; rice, 2d.; coffee, 6d.; tea, 2s.; sugar, 3s.; salt, 1d. per lb.; wine, 4s. 6d.; brandy, 18s.; beer, 2s. per gal.; tobacco, 2s. 6d. per lb.

Wages for labour.—Domestics, £15 to 20; predial-shepherds, £36; farm servants, £24 per annum; trades, 6s. per diem.

It remains for me now only to notice two important features connected with the colony. I have already adverted to the advantages possessed by colonies which have public companies in England connected with their welfare. Western Australia, excepting in the short-lived instance of the *Australind Association*, has not hitherto had this collateral benefit. Earl Grey, however, with a view to the remedying of this defect, has sanctioned the formation, by act of parliament, of a *Colonization Assurance Company*, in London, whose operations for the promotion of colonization have commenced in Western Australia. The corporation, under the provisions of the act of the imperial legislature (13 Vic. c. 24), has rightly ordained that the responsibility of its shareholders be *limited* to the amount for which they have severally subscribed. The capital authorised to be raised in the first instance, is £100,000 in £10 shares, with power of increase, subject to the consent of the Lords of her Majesty's Treasury. The corporation is authorised to purchase and to hold lands to any extent in the colonies and dependencies of the British Empire: any emigrants conveyed or caused to be conveyed to Western Australia by the company, shall entitle them to receive land scrip to the value of £20 for each emigrant, male or female, above fourteen years of age, or for every two emigrants under that age. The land-scrip is to be taken in payment of crown lands in Western Australia, at the rate of 20s. per acre; corporation may require the governor to put up crown lands, under certain provisos. Accounts of corporation are to be annually reaudited by the registrar of joint-stock companies, and the annual report to be sent to the Board of Trade. The operations of the company are not to extend beyond Western Australia, except the consent (a necessary and wise precaution where such extensive powers and privileges have been conferred) of her Majesty's Secretary of State for the Colonies, shall have been previously obtained. Taken altogether, the act is liberal, and may be beneficially worked for the interests of the shareholders of the company, and of the colonists. It is understood that the cor-

poration intend to purchase eligible sites in Western Australia, for the formation of settlements, and they propose to enable emigrants to lease lands from the corporation on the principles of Life Assurance; such lands, on the payment of a rent for a given period, or on the termination of the life of the leaseholder, to be the property of his heirs; thus the emigrant may be enabled to pay for his land, not out of capital, but out of profits to be realized from his own labours, aided by the fostering exertions of the corporation. Thus—A., aged 30, for an annual premium of £7 4s. 1d., is put into immediate possession of 100 acres of good land, and whenever he dies—even if within the first year—the land becomes the property of his representatives, without further payment. There are also calculations for limited periods of assurance. The company propose to devote a portion of its funds to assist in providing for all its settlements, churches and clergy of the church of England; and it will afford liberal assistance to other classes of Christians, according to the circumstances of each case. I believe this useful association has been projected and carried into operation by R. W. Nash, Esq., late member of the Legislative Council in Western Australia, by whose unceasing exertions the colony has been materially benefitted.

TRANSPORTATION.—Her majesty's government, in accordance with the strongly expressed desire of the colonists of Western Australia, have resolved to send out a moderate number of convicts to the colony, who will, at first, be entirely under the control of the government, and be employed in improving the harbours, opening roads, cutting valuable timber, or in such other public works as the government, in conjunction with a competent officer sent from England for the purpose, may consider most likely to develop the resources of Western Australia, and to remove some of the obstacles to the progress of the colony, by employing a competent force of labour upon undertakings to which private means have proved inadequate. The convicts to be selected for this useful purpose, will be those who from their conduct at their present places of detention, and from their having to undergo but a short period of imprisonment prior to becoming qualified for a greater degree of freedom, appear likely to behave in an industrious and orderly manner. When they are set free from the public works on account of

good conduct, their services will become available to the settlers; but if they should misbehave, and be therefore returned upon the hands of government, they will again be placed on public works at the expense, as in the first instance, of the British Treasury. There is no intention of assigning convicts to settlers, or of introducing in any form the system of assignment. There will be no interference whatever with the free character of the colony; and should parliament, as it is hoped, continue to grant an annual sum for promoting free emigration to those colonies which receive convicts, her Majesty's government intend to send emigrants of good character, and of both sexes, equal in number to the convicts transported to Western Australia.

By intelligence from Perth, Western Australia, dated April, 1850, it appears that the active population of the colony are in favour of these propositions, but they rightly deem that their efforts for the promotion of moral and spiritual instruction must be redoubled and watched over with increased vigilance. The statements given at page 409 to 419 of this volume shew that transportation, under proper management, is the most Christian course which can be adopted for the reformation of the sinner, and for the preservation of the community to which he belongs, from the effects of a renewal of his crimes. The absence of all spiritual instruction, the indiscriminate assignment-system, the terrific punishments adopted without the slightest effort to correct the evil tendencies of the criminals, and the pouring into a colony thousands of convicts without due admixture of free men and women, caused the necessity for cessation of transportation to New South Wales. But in Western Australia her Majesty's government are adopting a sound system, by which the United Kingdom may be relieved annually from the pressure of an enormous prison population, the expenses on the British Treasury materially lessened, and a fine colony, blessed with a genial clime and fertile soil, but with only 5,000 inhabitants to 1,000,000 square miles of territory, may be rendered attractive to free settlers of all classes, and have its prospects increased of becoming the seat of a large and flourishing free population.*

SUMMARY.—The limited number of pages to which each division of this work is neces-

* See Letter from Earl Grey to R. W. Nash, Esq., of 20th December, 1849.

sarily restricted, not only compels an abbreviation of different sections, but altogether precludes the discussion of several topics more or less connected with the four colonies whose description occupies the present volume.

The chief aim of this work being one of plain and practical utility, I have devoted the fullest assignable space to the details best calculated to illustrate the progress, actual position, and resources of these provinces, alluding only incidentally to the flora and fauna of this singular country, with which the splendid volumes of Gould and Angas, and the interesting delineations of Mitchell, Sturt, and other explorers, have already, to a considerable extent, familiarised the public mind.

But there remains another subject from which I turn with more reluctance, although the above-named authors have dwelt upon it at some length; and Eyre and Grey also have published the results of their investigation. I allude to the condition and character of the aborigines, whose preservation from extinction, and, if possible, conversion, deserves the most strenuous efforts on the part of a Christian nation, and is indeed the only compensation that can be made for the evils which the very presence of the white man, and the civilization, which has become a second nature to him, unavoidably brings to the savage. Viewing it in this aspect the

subject is one of deep and painful interest; to me it also appears very important in an ethnological point of view; and when in Australia I exhumed the body of a female aborigine who was buried in the solitude of the forest with the customs peculiar to her race; and I obtained, after execution, the body of a native chief, brought to the scaffold for the murder of an English shepherd, at Bathurst, New South Wales; I measured their skeletons, bone by bone, and minutely investigated their physical configuration. Having, however, arrived at my last page, I am reluctantly compelled to close the volume with a hope that when the historical, geographical, and statistical delineation of the colonies is completed, I may, with the aid of that liberal support with which the public has thus far sustained my labours, be enabled to present in a single volume a full and illustrated description of the aboriginal or native subjects of the British crown in various parts of the world, viz., the natives of British North America, of British South America, of Australia, of New Zealand, of India, of Africa, and of the islands in the Pacific and eastern hemisphere.

In conclusion, I cannot, I believe, offer a better summary of the facts contained in the preceding pages, than is comprised in the following tabular view of the colonies planted by England in Australia:—

State of the Colonies on the island-continent of Australia, in 1850.

Particulars.	New South Wales.	Victoria.	South Australia.	Western Australia.	Total.
Date of formation, A.D.	1787	1836	1836	1829	—
Area in square miles, about	500,000	92,000	300,000	1,000,000	2,000,000
White population, about	200,000	50,000	50,000	5,000	305,000
Number of acres to each inhabitant	1,600	1,117	3,840	128,000	—
Acres of land in cultivation	130,000	40,000	50,000	8,000	228,000
LIVE STOCK:—					
Horses	100,000	17,000	6,000	3,000	126,000
Horned cattle	1,400,000	400,000	100,000	12,000	1,912,000
Sheep	7,000,000	5,200,000	1,200,000	150,000	13,550,000
Swine	70,000	6,000	1,500	2,500	80,500
MARITIME COMMERCE:—					
Value of imports in £	1,300,000	500,000	400,000	45,000	2,245,000
Value of exports in £	1,500,000	600,000	500,000	35,000	2,635,000
Shipping tonnage inwards	140,000	70,000	40,000	5,000	255,000
Local revenue in £	300,000	100,000	120,000	10,000	530,000
Civil cost to Great Britain in £	—	—	—	7,500	7,500
Military cost to Great Britain in £	70,000	—	16,000	11,000	97,000
Taxation per head, in shillings	30	40	48	40	—
Consumption of imports per head, in shillings	130	200	160	180	—
STAPLE EXPORTS:—					
Wool, in lbs.	16,000,000	14,000,000	3,000,000	400,000	33,400,000
Tallow or Oil, in cwts.	60,000	28,000	3,000	—	91,000
Metals, in £	25,000	—	350,000	—	375,000
Chief town	Sydney	Melbourne	Adelaide	Perth	—
Population of capital	50,000	15,000	15,000	1,500	—

Note.—In the £70,000 stated as military cost of New South Wales, Victoria province is included. In the return of metals exported as from New South Wales, Victoria is also included. Round numbers are used.





70

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